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CATALOGUE C

No. 118

## Sanitary Plumbing Fixtures and Supplies

General Offices and Showrooms:
221 to 239 Market St. and 1 to 17 Beale St.
San Francisco

218 to 224 North Los Angeles St.
Los Angeles

Eastern Office<br>256 and 257 Broadway, New York

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PRINTING AND BINDING
THE HICKS-JUDD COMPANY SAN FRANCISCO
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## INTRODUCTION

We present this catalogue believing that the trade will appreciate our efforts in compiling a book illustrating all that is best in sanitary appliances and plumbing supplies.

The illustrations of plumbing fixtures are all made from direct photographic reproductions of the articles set up complete as for service in the manner and position in which they are shown. Thus we show in miniature the article itself.

Manufacturers' lists have been used as far as possible. We also give dimensions, capacities, weights, etc., and where practicable have inserted approximate shipping weights and measurements. A code word is provided for every article in this catalogue, and when used in connection with the general code provided, will serve to reduce the cost of cable and telegraphic orders.

We bespeak your careful attention to the following pages and request your consideration in our behalf.

Respectfully yours,
HOLBROOK, MERRILL \& STETSON.

## Terms, Conditions and Instructions

When ordering, give plate number and size: also details according to catalogue description, and thus save time and correspondence and avoid confusion.

Specifications for goods not standard should be explicit and complete, and, when possible, accompanied by sketch

Contracts are subject to delays incident to strikes, accidents, or causes beyond our control.

Definite instructions as to route, packing, insurance, etc., should accompany each order; otherwise we will not insure and route is optional with us.

As there is a constant improvement in styles of plumbing fixtures, it is impossible to give dimensions and sizes that will continue as at present; but this information for any fixture shown herein will be furnished upon request.

Boxing and cartage charged at cost.
Claims for shortage must be made immediately upon receipt of shipment.

No goods taken back or exchanged unless by mutual agreement.
Our responsibility for loss or damage ends after obtaining transportation company's receipt in good order.

All quotations, unless otherwise stated, are made at our stores in San Francisco or Los Angeles and are subject to change without notice.

Lists and discounts subject to change at any time without notice.
Our terms for parties with approved credit are sixty days net cash, or two per cent for cash in ten days.

To all parties who have no arrangements for credit, we should receive references or cash with orders.

All overdue accounts are subject to sight draft without notice.
Correspondence to receive our immediate attention should be addressed to the firm and not to individuals.

## TELEGRAPH CODE.

For convenience of customers, the following sentences may be used for inquiries concerning orders, shipments, quotations, etc., in conjunction with the Code Words throughout the Catalogue.

Cable Address: "Holmerson."

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## QUOTATIONS.



Following Table shows Code Words for Quantities: by Numbers, Dozen, Gross, Pounds, Tons or Feet.


## GENERAL INDEX.

Acid-Muriatic ..... 692
Acme Back Water Sewer Valves ..... 648a
Air Chambers-Sink ..... 395
" Cocks ..... 520
" Valves ..... 520
Ajax Hopper Closet ..... 47
Alameda Washout Closet ..... 46
Alfa Washdown Siphon Closet ..... 32
Alma Washdown Siphon Closet ..... 34
Alligator Wrenches ..... 799
Aluminum Gas Tips ..... 497
" Paint ..... 695
American Long Screws ..... 599
Angle Plate Vises ..... 793
Angle Valves-Flushometer ..... 8
" Supply Valves ..... 104
" Valves-Brass ..... 536 to 339
Anti-Freezing Closets ..... 57, 58
Antimony ..... 689
Apothecary's Measure ..... 821
" Weight ..... 821
Apron Wall Supports ..... 368
Aprons-Marble ..... 290
Armstrong's Pipe Vise ..... 795
" Stocks and Dies ..... 771
Asbestos Mill Board ..... 693
" Packing ..... 693
" Paper ..... 693
Atlantic Ship Water Closet ..... 74
Atlas Pipe Wrench ..... 798
Augers-Gas Fitters ..... 720
Auto Hopper Closet ..... 54
Automatic Tanks ..... 146
" Tank Connections ..... 146
Avoirdupois Weight ..... 821
Awls-Scratch ..... 719, 720
B
Babbitt Metal ..... 691, 694
Back Water Valves ..... 648a
Backs-Marble ..... 290
Sink, Cast Iron, Enameled.... 396, 39Steel404
Badge Air Valves ..... 520
Bag Traps ..... 355
Bags-Tool ..... 721
Bailey Slop Hoppers ..... 423
Ball and Socket Joints ..... 230
Ball Cocks-Closet Tank. ..... 111
Compound Lever ..... 111
Compression ..... 521

## A <br> A

Ball Cocks-Dale . . . . . . . . . . . . . . . . . . . . . . 111.
Foster . ........ ..................111, 522
Ground Key ........................ 521
Ball Joint Shower Heads................. 230
Balls-Copper . ......................... . 109, 492
Float ...................... . 109, 492, 493
Glass . . . . . . . . . . . . . . . . . . . . . 109, 493
Naugatuck ........................... 492
Zinc .............................. . 109 , 493
Balls for Fuller Bibbs..................... 502
Bands-Pipe ................................. 641
Barber Lavatories-Marble ......... 284, 285
Enameled ........ 327
Barber Slabs ............................ . 284 , 285
Barnes' Pipe Cutters ...................... 733
Bars-Closet Tank . . . . . . . . . . . . . . . . . . . . . 110
Roller Towel ......................... . 248
Towell, N. P................ . . . 247 to 251
Opal Glass .................. 251
Plate " .............252, 253
Swing ...................250a, 251
Basin Chains .............................. 489
" Clamps ............................. 491
Cocks ......................... 342 to 351
" Cock Washers ...................... . . 362
" Gaskets .............................. 362
" Grates ................................. 482
" Plugs .......................... . 479 to 481
Slabs .......................... . 286 to 290
" " -Marble Corner......286, 288
Recess .......... 287 Quarter Circle.. 286
" Wrenches ......................... 802
Basins-"D" Pattern, Earthenware..... 294
Enameled ............................ 295
Round, Earthenware .........291, 292
Oval " .................... 293
Baskets—Towel .........................246a, 247
Urinal ................................. 145
Bath Bibbs .................................. . 507
" Chains ................................ 489
" Cock Couplings .................... . . 202
Bath Cocks .............................200, 201
" with Supply Pipes. ...... 202, 203
Bathing Caps .............................. . 233
Bath Mats-Cork ........................... 265
Rubber ................................ . 265
Bath Plugs ........................... . . 479 to 481
" Room Fittings................ 234 to 266
" Sprays ............................231, 232
" Supply Pipes ...................... . . 204
" Sprays-Massage ... ..............232a
Baths Enameled ..................... 164 to 193
Foot, Enameled ................... 193
" Solid Porcelain ........... 163
Baths-Enameled-Hospital ..... 189
Needle Shower 214 to 217
Shower ..... 214 to 226
Sitz, Enameled ..... 190 to 192
Solid Porcelain ..... 162
Solid Porcelain ..... 157 to 163
Steel, Copper Lined ..... 196
Enameled ..... 197, 198
Nickeloid ..... 196
Zinc ..... 199
Bath Tub Decorations ..... 194, 195
" " Enamel ..... 695
" Gaskets ..... 362
" " Hand Rails ..... 247
" " Head Rests ..... 264
" " Mats ..... 265
" " Seats ..... 264, 264a
" " Soap Dishes ..... 237, 243, 244
" " Straps ..... 264
" " Traps ..... 206
205, 207
Bell Supply and Waste ..... 207
" Traps ..... 484
Bench Plates ..... 716
" Shears ..... 762
Benders-Lead Pipe ..... 722, 723
Bending Pins ..... 752
Bends-Cast Soil Pipe ..... 629 to 632
Lead ..... 468
Bends and Ferrules ..... 469
Bent Ferrules-Brass ..... 476
Berkeley Roofing Tin ..... 687
Bibb Flanges ..... 490
" Washers ..... 508
Bibbs-Bath ..... 507
Compression Hose ..... 504, 506
Monarch ..... 506
Plain 503, 505, 506
Fuller Hose ..... 500, 501
Monarch ..... 501
Plain ..... 499, 501
Lever Hose ..... 511
Plain ..... 509, 510
Self-Closing, Doherty ..... 515
Moore's ..... 515
Telegraph ..... 516
Bidets ..... 208
Bignal \& Keller Pipe Threading Machines ..... 766 to 768
Blades-Hack Saw ..... 756 a
Blow Pipes ..... 752
Boards-Closet Tank ..... 109
Drain, Sink ..... 394
Bobs-Plumb ..... 721
Bodies-Bracket ..... 494
Boiler Couplings-Brass ..... 474
-Malleable ..... 593
" Rings ..... 434
" Stands ..... 435
Boilers-Range ..... 431 to 434
Boilers-Steam Cottage ..... 446
Mercer ..... 448 to 451
Water, Cottage ..... 445
" Mercer ..... 448 to 451
Bolt Heads ..... 151
Bolts-Closet ..... 107
Closet Seat ..... 112
Door ..... 153
Floor Flange ..... 107
Expansion ..... 152
Stall ..... 151
Stove ..... 655
Bolts for Cast Iron Sinks. ..... 398
" "Columbus Sinks ..... 401
New Era Sinks ..... 403
Borers-Tap ..... 721, 722
Bossing Sticks ..... 738
Boston Siphon Jet Closet ..... 30
Bowls-Closet Enameled ..... 88
" Siphon Jet ..... 80
" Wash Down ..... 81 to 83
" " Out ..... 84
Lavatory ..... 291 to 295
Box Plates ..... 498
Boxes-Grease, Rosin and Flour ..... 722
Sidewalk ..... 428
Street Washer ..... 428
Toilet Paper ..... 256
Valve ..... 555
Ventilating ..... 427
Braces-Drill ..... 736
Bracket Bodies ..... 494
Brackets-Apron ..... 368
Closet Seat ..... 370
Tank ..... 370
Concealed Lavatory ..... 363
Foot Rail ..... 604
Gas ..... 495, 496
Lavatory ..... 368 to 370
Sink ..... 397, 398, 403
Branches-Tee, Soil Pipe ..... 632 to 635
Y, Soil Pipe ..... 636 to 638
Upright Y ..... 634a
Branch Tees ..... 619
Brass Collars-Threaded ..... 477
Ferrules ..... 476
Pipe ..... 663
" Fittings ..... 606
Sleeves ..... 477
" Slip Joint Nuts ..... 477
" Strainers ..... 478
Tubing ..... 662, 663
-Sheet ..... 664
Brazier's Torches ..... 781 to 788
Breast Drills ..... 736
Brighton Closet Range ..... 64 to 67
Brilliantshine ..... 697
Bronze-Tobin ..... 667
Broughton Basin Cocks ..... 349
Brown's Pipe Tongs ..... 796
Brushes-Fountain ..... 266
Soil ..... 723
Buggy Washers ..... 714
Bulbs-Sure Grip ..... 231
Bumpers-Rubber ..... 112
Tack ..... 112
Burner Plyers ..... 751
Burrs-Tin ..... 655
Bushings-Brass ..... 606
" -Cast Iron ..... 613
-Hose ..... 711
-Malleable ..... 598
or Guides for Pipe Stocks ..... 775
Buzzell Basin Wrenches ..... 802
C
California Street Washers ..... 713
Campbell Sink Brackets ..... 397
Canfield Rubber Couplings ..... 108
Cans-Capacity of ..... 809
Cape Chisels ..... 725
Caps-Bathing ..... 233
Brass ..... 606
Cast Iron ..... 612
Malleable ..... 590
Ventilating ..... 642
Castings-Shrinkage of ..... 813
Cast Iron Screwed Fittings ..... 607 to 621
" Soil Pipe ..... 628
Caulking Chisels ..... 727
Lead ..... 689
Ceiling Plates ..... 621
Cement-Gas Fitters ..... 651
" -Imperial ..... 696a
Laundry Trays ..... 413
Century Tapping Machines ..... 777
Cesspool Plates ..... 427
Cesspools-Cast Iron ..... 425
Hydrant ..... 426
Stall ..... 425
Chabot Cocks ..... 532
Chain-Gunters ..... 819
Pipe Vises ..... 790
" Stays ..... 484 to 486
Chain Tongs ..... 796
Chains and Snaps ..... 489
" -Basin ..... 489
Bath ..... 489
Jack ..... 487
Safety ..... 488
Wash Tray ..... 489
Chambers-Air ..... 395
Champion Overflow Slop Hoppers ..... 423
Water Filters ..... 714b
Chandelier Hooks-Malleable ..... 591
Charcoal ..... 692
Check Valves ..... 540
Chicago Gooseneck Connections ..... 713
Chino Wash Down Siphon Closet ..... 41
Chipping Knives ..... 745
Chisels-Cape ..... 725
Caulking ..... 727
Cold ..... 724
Diamond Nose ..... 725
Floor ..... 726
Half Round Nose ..... 725
Lantern ..... 724
Packing ..... 728
Round Nose ..... 725
Wire ..... 724
Wood ..... 726
Yarning ..... 728
Cigar Rests ..... 261
Circle-Properties of ..... 824
Circular Snips ..... 759
Cisterns-Capacity of ..... 810
Clamps-Basin ..... 491
Closet ..... 107, 108
Hose ..... 709, 710
Hydrant ..... 592
Service ..... 615
Stall ..... 147, 148
Tank Board ..... 109
Classification-Freight ..... 827, 828
Clayton \& Lambert Fire Pots ..... 780
Torches 780 to 783
Cleanouts-Soil Pipe ..... 639
Closet Bolts ..... 107
Bowls-Enameled, Siphon Jet. ..... 88
Enameled Wash Down ..... 88
Out ..... 88
Hopper, Siphon Jet ..... 83
Siphon Jet ..... 80
Wash Down Siphon ..... 81 to 8
Out ..... 84, 85
Closet Clamps ..... 107, 108
Couplings ..... 108
Floor Flange ..... 106
Gasket ..... 106
Hoppers ..... 85 to 9 :
Pans-Copper ..... 108
Closet Repairer-Superior ..... 108
Screws ..... 107
Seat Bolts ..... 112
Bumpers ..... 112
Hinges ..... 112
Seats ..... 97 to ..... 100
Supplies-Slip Joint ..... $10 \%$
Tank Boards ..... 109
Pulls ..... 109
Tanks ..... 94 to 96
Washers ..... 107
Closets-Alameda ..... 46
Alfa ..... 32
Alma ..... 34
Ajax ..... 47
Auto ..... 54
Boston ..... 30

## c

Closets-Chino ..... 41
Eddy ..... 40
Elb ..... 52
Flushometer ..... 3 to 25
Gila ..... 53
Gnu ..... 36
Hilo ..... 44
Hopper ..... 90, 91
Indus ${ }^{\circ}$. ..... 49
Jumbo ..... 12
Kelly ..... 56 to 58
Latona ..... 10
Nemo ..... 55
New Dome ..... 38
، Gem ..... 28
Oxus ..... Ј0
Pinal ..... 48
Prison ..... 54a
Rainier ..... 45
Ramona ..... 26
Range, Brighton ..... 64 to 67
Individual Bowl ..... 61 to 63
Parson's Trough ..... 59
Siphon Eduction $\ldots .58 a, 58 b$
Rosalia ..... $9,13,14,17$
Rush ..... 39
Ship, Atlantic ..... 74
Columbia ..... 72
Dandy ..... 77
Delaware ..... 75
H. M. \& S ..... 79
Knockabout ..... 78
Neptune ..... 68, 69
Jr. ..... 70, 71
Pacific ..... 73
Sands ..... 76
Sonoma ..... 16
Tiber ..... 11
Tigris ..... 51
Togo ..... 43
Tuma ..... 15
Volga ..... 42
Water ..... 9 to 58
Cloths-Wiping ..... 728
Cock Hole Covers ..... 486
Cocks-Air ..... 520
Ball, Compression ..... 521
Foster ..... 522
Lever ..... 521
Basin, Compression ..... 347, 348
Fuller ..... 342 to 345
Self-Closing ..... 49, 350
Swing ..... 346
Bath ..... 200, 201
Chabot ..... 532
Cooler ..... 516
Corporation ..... 533
Gas ..... 494
Stop ..... 494
Hose, Gas ..... 494
Cocks-Independent Gas ..... 494
Jeffress ..... 532
L Burner ..... 494
Lock ..... 518
Meter ..... 532
Milk ..... 519
Oil ..... 519
Pantry ..... 351
Racking ..... 518
Service, Brass ..... 530, 531
" Iron ..... 531
Shampoo ..... 346
Ship Closet ..... 79
Sill, Compression ..... 535
Stop ..... 523 to 529
Urinal ..... 142, 143
Urn ..... 519
Cold Chisels ..... 724
Collars-Flush Pipe ..... 108
Threaded Brass ..... 477
Colma Closet ..... 86
Columbia Ship Water Closet ..... 72
Columbus Sinks ..... 400,405
Comb and Brush Holder ..... 246, 263
Combination Plyers ..... 750
Shears and Pipe Crimper..... 760, 761
Compass Saws ..... 756
Compasses ..... 734
Compound Lever Ball Cocks ..... 111
Compression Ball Cocks ..... 521
Basin Cocks ..... 347, 348
Bath Bibbs ..... 507
Cocks ..... 200
Hose Bibbs ..... 504,506
Oil Cocks ..... 519
Pantry Cocks ..... 351
" Plain Bibbs ..... 506
Sill Cocks ..... 535
Stops ..... 523, 524
Wash Tray Bibbs ..... 513, 514
Conductor Pipe ..... 680
Connected Waste and Overflow ..... 205
Connections-Automatic Tank ..... 146
Flush Pipe ..... 105
Goose Neck ..... 713
Rubber, Elbow ..... 105
Straight ..... 105
Sink ..... 361
Slip Joint, Elbow ..... 491
Straight ..... 204
Urinal ..... 144
Adjustable ..... 145
Continuous Waste Pipes ..... 359
Cooler Cocks ..... 516
Copper Balls ..... 109, 492
Pantry Sinks ..... 405
" -Sheet. ..... 665, 666
Coppers-Solder ..... 729, 730
Cork Bath Mats ..... 265
Cornice Copper ..... 666
Corner Sinks ..... 393
Coronet Radiators ..... 455
Corporation Cocks ..... 533
Corrugated Iron ..... 673, 674
Cottage Steam Boilers ..... 446
" Water Boilers ..... 445
Cotton Waste ..... 651
Couplings-Bath Cock ..... 202
Boiler, Brass ..... 474
Malleable ..... 593
Brass ..... 606
Cast Iron ..... 617
Closet ..... 108
Hose ..... 709
Malleable ..... 586, 587
Plain ..... 475
Rubber, Canfield ..... 108
Sink ..... 399, 401, 403
" Columbus ..... 401
" New Era ..... 403
Tank ..... 110
Covers-Cock Hole ..... 486
Sidewalk Box ..... 428
Trap ..... 643
Crescent Instantaneous Water Heaters ..... 440 to 442
Crimping Tongs ..... 762
Crosses-Brass ..... 606
Cast Iron ..... 611
Drainage ..... 626
Hand Rail ..... 604
Malleable ..... 585
Railing ..... 603
Crossovers-Malleable ..... 592
Cubic Measure ..... 819
Cup Leathers ..... 110
Cups-Drip for Drinking Fountains ..... 484
Force ..... 729
Soil ..... 728
Curtain Rings ..... 233
Rods ..... 233
Snaps ..... 233
Curtains-Shower Bath ..... 233
Cutters-Lead Pipe ..... 731
Pipe ..... 732, 733
Washer ..... 731
Cutting Nippers ..... 747
D
Dale Ball Cock ..... 111
Dandy Pump Water Closet ..... 77
Decimal Parts of a Foot ..... 820
Deck Screws ..... 475
Decorations-Bath Tub ..... 194, 195
Delaware Ship Water Closet ..... 75
Detroit Radiator Valves ..... 541
Diadem Radiators ..... 454
Diamond Nose Chisels ..... 725
Diamond Universal Sink Trap ..... 360
$V$ ises ..... 790
Dies-Pipe, Holland ..... 774
Nye ..... 773
Dipped Pipe ..... 574
Direct Indirect Radiators ..... 457
Radiators 452 to 456
Dishes-Soap, Bath Tub ..... 237, 243, 244
Soap, Nickel Plated. ..... 234 to 244
Porcelain ..... 262
Dividers-Wing ..... 734
Doherty Basin Cocks ..... 350
Bibbs ..... 515
Pantry Cocks ..... 351
Domestic Water Heaters ..... 438
Double Basin Cocks ..... 345
Cutting Shears ..... 761
Hubs ..... 643
Pantry Cocks ..... 351
Seamers-Roofing ..... 716, 719
Drainage Fittings-Cast Iron Screwed
.622 to 6 ..... 627
Drain Board Mats ..... 395
Boards-Sink ..... 394
Drains-Floor ..... 426, 484
Surface ..... 426
Dressers-Plumbers ..... 737
Drift Plugs ..... 738
Drill Braces ..... 736
Drills-Breast ..... 736
Drinking Fountains ..... 337, 338
Drip Cup for Drinking Fountain ..... 484
Drivers-Screw ..... 734
Drop Elbows ..... 579
Tees ..... 584
Drum Traps-Cast Iron ..... 644
Enameled ..... 644
Lead ..... 467
Dry Measure ..... 821
Duffy Sink Strainers ..... 399
Duplex Air Valves ..... 520
Pipe Threading Machine ..... 768
Stocks and Dies. ..... 769,770
Testing Plugs ..... 753
Wash Trays ..... 411
Durham Fittings ..... 622 to 627
Dusters-Plumbers ....... ............. 723 ..... 723


Eaves Trough ..... 678
Eccentrics-Fuller ..... 502
Eclipse Tapping Machine ..... 776
Eddy Siphon Jet Closet ..... 40
Edges-Plumbers' Side ..... 737
Eighth Bends-Soil Pipe ..... 631
Elbe Wash Down Siphon Closet ..... 52
Elbow Shears ..... 762
Elbows-Adjustable Conductor ..... 681
Elbows--Boiler ..... 593
Brass ..... 606
Cast Iron ..... 607
Corrugated Conductor ..... 681
Drainage ..... 622, 62
Long Radius, Cast Iron ..... 618
Malleable ..... 576 to 579
Railing ..... 602
Rubber ..... 105
Slip Joint, Flush Pipe ..... 105
Speaking Tube ..... 682
Supply Pipe, Slip Joint ..... 491
Union ..... 593, 594
" Radiator ..... 542
Elgin Adjustable Wrenches ..... 799
Emery Grinders ..... 735
Empire Bath Tub Seats ..... 264a
Enamel-Aluminum ..... 695
Bath Tub ..... 695
Black ..... 694
Enameled Iron Bath Tubs. ..... 164 to 193
" Closet Tanks ..... 95
" Bowls ..... 88
" Drinking Fountains.337, 338
" Kitchen Sinks.... 377 to 393
" Lavatory ......... 296 to 331
" Laundry Trays... 409 to 412
Sink Backs ..... 396, 397
" Slop Sinks ..... 415 to 419
" Wash Sinks ..... 332 to 336
" Water Closets ..... 49 to 55
Erie Unions ..... 597
Escutcheon Pins ..... 677
Escutcheons-Nickel Plated ..... 490
Expansion Bolts ..... 152
Extension Pieces-Brass ..... 507
Malleable ..... 590
Soil Pipe ..... 639
F
Factory Wash Sinks ..... 390
Favorite Bath Tub Waste ..... 205
Fender Tips-Rubber ..... 112
Ferrules-Bent ..... 476
Brass ..... 476
" Trap Screw ..... 476
Iron ..... 477
Lead and Iron ..... 469
Ferrules and Bends ..... 469
Fidelity Steam Traps ..... 570
Fifth Bends-Soil Pipe ..... 630
Files ..... 739, 740
Filters-Water ..... 715, 714a, 714b
Fire Hose Valves ..... 543
" Hydrants ..... 556 to 558
" Pot Repairs ..... 785,786
" Pots-Clayton \& Lambert...780, 781
Fire Pots-Coal Oil ..... 479
Gasoline ..... 780,781
Sheet Iron ..... 778
Fish Traps ..... 568
Fittings-Brass Pipe ..... 606
Brass Stall ..... 147 to 153
Cast Iron Pipe ..... 607 to 621
Cast Soil Pipe ..... 629 to 649
Drainage ..... 622 to 627
Durham ..... 627
Malleable, Classification of ..... 575
Pipe 576 to 605
Overflow Bath Tub ..... 206
Railing ..... 602 to 605
Waste, Bath Tub ..... 206
Flanges-Bibb ..... 490
Brass for Iron Pipe. ..... 490
Tubing ..... 490
Cast Iron ..... 615
Closet Floor ..... 106
Flanges-Railing ..... 605
Flange Unions ..... 614
Floats-Copper Ball ..... 109, 492
Glass Ball ..... 109, 493
Zinc Ball ..... 109, 493
Float Valves ..... 521, 522
Floor Chisels ..... 726
" Drains ..... 426, 484
Plates ..... 621
Slabs-Marble ..... 290
Flushometers-Closet ..... to 25
Urinal ..... 115
Flush Pipe Collars ..... 108
" " Connections ..... 105
" Elbows ..... 105
" " -Rubber ..... 105
" Slip Joint ..... 105
" Posts ..... 106
" Straps ..... 106
Pipes-Closet ..... 101
Fluxes for Brazing and Soldering ..... 814
Folders-Roofing ..... 718
Folding Ship Lavatories ..... 339 to 341
Foot Baths-Enameled ..... 193
" -Porcelain ..... 163
Rail Brackets ..... 604
Force Cups ..... 729
Pumps-Plumbers' ..... 803, 804
Foster Ball Cocks ..... 111, 522
Fountain Brushes ..... 266
Fountains-Drinking ..... 337, 338
Fractional Parts of an Inch ..... 820
Frames-Hack Saw ..... 756a
Fuller Basin Cocks ..... 342 to 345
" Bath Bibbs ..... ธ07
" " Cocks ..... 200, 201
Hose Bibbs ..... 500, 501
Pantry Cocks ..... 351
Plain Bibbs ..... 499, 501
Furnaces-Plumbers', Primus ..... 779
-Sheet Iron ..... 778
Shampoo Cocks ..... 346
Wash Tray Bibbs ..... 512, 514
G
Galvanized Laundry Trays ..... 414
Range Boilers ..... 431 to 434
Sinks-Cast Iron ..... 392
" " -Steel ..... 400, 402, 404
Garden Valves ..... 534
Gas Brackets ..... 495, 496
" Cocks ..... 494
" Log Valves ..... 538
" Pendants ..... 497
" Plyers ..... 751, 752
" Tips ..... 497
Gaskets-Rubber Bath ..... 362
Closet ..... 106
Lavatory ..... 362
Sink ..... 362
Gasoline Water Heaters ..... 442, 443
Gate Valves-Brass ..... 544
Flushometer ..... 8
Iron Body ..... 545
Ludlow ..... 554
Gauges-Testing Air ..... 805
Mercury ..... 805, 806
Spring ..... 805
Wire ..... 742
Giant Heaters-Primus ..... 789
Gila Wash Out Closet. ..... 53
Glass Balls ..... 109, 493
Glasses-Looking, Plumbers' ..... 741
Globe Valves ..... 539
Gnu Wash Down Siphon Closet ..... 36
Gold Pin Radiators ..... 457
Goose Neck Connections ..... 713
Siphons ..... 110
Grates-Basin ..... 482
Sink ..... 483
Gratings-Sink ..... 395
Grease Interceptors ..... 422
" Traps ..... 422
Grinders-Emery ..... 735
Groovers-Hand ..... 740
Ground Key Ball Cocks ..... 521
Guides or Bushings for Pipe Stocks ..... 770
Gutter-Eaves ..... 678
-Urinal Stall ..... 147
" Hangers ..... 678, 679
" Tongs ..... 718
H
Hack Saw Blades ..... 756a
" " Frames ..... 756a
Saws ..... 756a
Half Y Branches ..... 637, 638
Hammers--Ball Pein ..... 742
Planishing ..... 744
Plumbers' ..... 743
Raising ..... 744
Riveting ..... 743
Setting ..... 743
Straight Pein ..... 742
Hand Groovers ..... 740
Handles for Compression Work ..... 508
" " Fuller Work ..... 502
Hangers-Expansion Pipe ..... 620
Gutter ..... 678, 679
Lavatory, Wall ..... 363
Hatchets ..... 744
Hawk's Bill Shears ..... 760
Head Rests-Bath Tub ..... 264
Heads-Bolt ..... 151
Conductor ..... 681
Nail ..... 675
Shower ..... 228 to 230
Headson Automatic Pipe Wrenches. ..... 801
" Pipe Cutters ..... 732
Heaters-Menlo Tank ..... 444
Primus ..... 789
Water, Domestic ..... 438
Gas ..... 436 to 441
Gasoline ..... 442, 443
Instantaneous .439 to 442
Hilo Wash Out Closet
794, 795
Hinged Pipe Vises
112
Hinge Rubbers
112
Hinges-Closet Seat
153
for Stalls ..... 603
H. M. \& S. Ship Water Closets. ..... 79
Holders-Bath Brush ..... 242
Cigar ..... 261
Comb and Brush, N. P ..... 246
Porcelain ..... 263
Match, N. P ..... 261
Porcelain ..... 263
Soap and Sponge. ..... 243, 244
Soap and Tumbler ..... 238 to 241
Soap, Porcelain ..... 262
Sponge ..... 242 to 245
Porcelain ..... 262
Toilet Paper, N. P............256a, 257
Porcelain ..... 262
Tooth Brush and Tumbler... 239 to 24
Powder ..... 245241
Tumbler ..... 238
Wash Cloth ..... 248
Whisk Broom, N. P ..... 245
Porcelain ..... 262
Holland Pipe Dies ..... 774
" Stocks and Dies ..... 772, 774
Hollow Punches ..... 754
Hook Plates ..... 620
Hooks-Chandelier ..... 591
Conductor Pipe ..... 681
Gas Pipe ..... 650
Nickel Platerl ..... 255
Plumbers ..... 6.50
Pot ..... 739
Ring Pipe ..... 620
S. ..... 109
Shave ..... 739
Single Pipe ..... 620
Soil Pipe ..... 650
Hopper Valve Closets ..... 90, 91
" Valves ..... 517
Hoppers-Closet, Colma ..... 86
Enameled, Oval ..... 89
Round ..... 89
Jersey ..... 87
New Pattern ..... 93
Philadelphia ..... 93
Porcelain, Oval ..... 87
Ship ................ ..... 87
Ship ..... 92
Short, Enameled ..... 93
Porcelain ..... 85
Siphon Jet ..... 83
Townsend ..... 86
Slop, Baily ..... 423
Champion ..... 423
Marquis ..... 423
Menlo ..... 424
Horizontal Range Boilers ..... 434
" Check Valves ..... 540
" Tee Y Branches ..... 635
Hose Bibb Ends ..... 712
Bibbs-Compression ..... 504, อ06
" -Fuller ..... 500, 501
" -Lever ..... 511
" -Cotton ..... 700
" -Rubber ..... 698 to 700
Bushings ..... 711
" Clamps ..... 709, 710
" Couplings ..... 709
" Fire Valves ..... 543
" Gas Cocks ..... 494
" Menders ..... 710, 711
" Nipples ..... 712
" Pipes ..... 702 to 704
Pipe Tips ..... 702
" Racks ..... 714
Reducers ..... 712
Sprinklers ..... 702, 703
Washers ..... 709
Hubs-Saddle ..... 641
Soil Pipe ..... 643
Hydrant Cesspools ..... 426
" Clamps ..... 592
Hydrants-Fire ..... 558
Wharf ..... 543
Hydrostatic Table ..... 825
Illiptical Traps ..... 355
Imperial Cement ..... 696a
" Union Radiators ..... 453
Increasers-Drainage ..... 623
Soil Pipe ..... 642
Independent Gas Cocks ..... 494
Indirect Radiators ..... 457
Individual Bowl Closet Range ..... 61 to .63
Indus Siphon Jet Closet ..... 49
Inlet Connections-Urinal ..... 144, 145
Instantaneous Water Heaters .439 to ..... 442
Interceptors-Grease ..... 422
Inverted Y Branches ..... 636
Iron-Corrugated ..... 673, 674
" -Sheet ..... 670 to 672
" Ferrules ..... 477
Irons-Round ..... 730
Jack Chain ..... 487
Jaws-Yankee, Pipe ..... 800
Jeffress Cocks ..... 532
Jenkins' Angle Valves ..... 539
" Check Valves ..... 540
" Globe Valves ..... 539
Jersey Hopper ..... 87
Joint Runners ..... 755
Joints-Ball and Sockets ..... 230
Elbow Slip ..... 491
Insertable ..... 649
Straight Slip ..... 204
Jumbo Siphon Jet Closet ..... 12
K
Kelly Automatic Closet ..... 56
" Frost-Proof Closet ..... 57, 58
Keystone Pipe Vise ..... 794
Knickerbocker Fountain Brushes ..... 266
Knives-Chipping ..... 745
Knock-About Pump Closet ..... 78
L
Ladles-Melting ..... 745
Lantern Chisels ..... 724
Latona Siphon Jet Closet ..... 10
Lava Gas Tips ..... 497
Lavatory and Sink Combinations ..... 325
" Bowls ..... 291 to 295
" Brackets ..... 368 to 370
" Gaskets ..... 362
" Legs ..... 364 to 367
Lavatory Plugs ..... 361
" Sets ..... 263
" Supply Pipe ..... 352, 353
" Trap ..... 855 to 357
" Wall Hanger ..... 363
" Wastes ..... 354
Lavatories-Barber, Enameled ..... 327
Marble ..... 284, 285
Enameled
Sectional ..... 296 to 331
Folding ..... 339 to 341
Marble ..... 274 to 285
Prison ..... 54a, 323
Ship, Enameled ..... 322
Folding ..... 339 to 341
Solid Porcelain ..... 269 to 273
Laundry Trays ..... 406 to 414
Lawn Sprinklers ..... 704 to 708
Lawson Gasoline Water Heaters ..... 443
" Thermostatic Valve ..... 437
" Water Heaters-Gas ..... 436
443
L Burner Cocks ..... 494
Leader Pipe ..... 680
Lead and Iron Bends and Ferrules ..... 469
" " " Ferrules ..... 469
Lead Bends ..... 468
" Pipe ..... 471
" " Cutter ..... 731
Solder Nipples ..... 470
" Soil Pipe ..... 471,472
" Tacks ..... 470
" Traps ..... 463 to 467
" Washers ..... 676
" -Bar and Sheet, Table of Weights ..... 814
Bar ..... 689
Caulking ..... 689
Pig ..... 689
Sheet ..... 472
Leathers-Cup ..... 110
Legs-Brass Stall ..... 149, 150
Lavatory ..... 364 to 367
Lever Hose Bibbs ..... 511
" Plain Bibbs ..... 509, 510
" Shower Stops ..... 528
" Stops ..... 526-527
" Wash Tray Bibbs ..... 512
Levers-Ball Cock ..... 110
Closet Tank ..... 110
Lincoln Kitchen Sinks ..... 376
" Laundry Trays ..... 407
Links-Split ..... 489
Liquid Measure ..... 820
Lock Cocks ..... 518
" Nuts--Brass ..... 606
" "-Cast Iron ..... 612
Closet Tank ..... 110
Malleable ..... 591
Long Measure ..... 819
Look Glass-Plumbers' ..... 741
Loose Key Compression Stops ..... 524
Low Down Closet Tanks ..... 96
Ludlow Fire Hydrants ..... 556 to ${ }^{5} 58$
" Gate Valves ..... 546 to 554
Lyon Snips ..... 758
M
Machines-Pipe Threading, Bignal \&
Keller ..... 766 to 768
Pipe Threading, Duplex. ..... 768
Oster..... 763 to 765P. D. Q. C...... 767
Tapping ..... 776, 777
Male and Female Unions ..... 596
" Unions ..... 596
Malleable Pipe Fittings ..... 576 to 605
Mallets ..... 737
Marble ..... 290
" Backs and Aprons ..... 290
" Floor Slabs ..... 106, 290
" Lavatories ..... 274 to 285
" Sink Slabs ..... 290
" Slabs-Basin ..... 286 to 290
" Partitions ..... 290
Wainscoting ..... 290
Marine Closets ..... 68 to 7
Marquis Slop Hoppers ..... 423
Match Holders-Nickel Plated ..... 261
Porcelain ..... 263
Match Scratches ..... 261
Mats-Bath, Cork ..... 265
Tub, Rubber ..... 265
Drain Board, Rubber ..... 395
Sink, Wood ..... 395
McKercher Wrenches ..... 800
Measure-Apothecaries' ..... 821
Cubic ..... 819
Dry ..... 821
Liquid ..... 820
Long ..... 819
Metric ..... 822, 823
Nautical ..... 820
Square ..... 819
Measures-Miscellaneous ..... 820
Melting Ladles ..... 745
Menders-Hose ..... 710, 71
Menlo Boiler Stands ..... 435
Lavatory Wastes ..... 354
" Roofing Tin ..... 686
" Slop Hoppers ..... 424
" Snips ..... 757
. Tank Heaters ..... 444
Mensuration of Solids ..... 824
" Surfaces ..... 824
Mercer Boilers ..... 448 to 451
Mercury Test Gauges ..... 805, 806
Metal-Babbit ..... 691, 692

## HOLBROOK, MERRILL \& STETSON

Metals-Melting Point of ..... 814
Meter Cocks ..... 532
Meters-Water ..... 560 to 566
Metric Weights and Measures ..... 822, 823
Milk Cocks ..... 519
Mill Board-Asbestos ..... 693
Milwaukee Basin Cocks ..... 350
Mirrors-Adjustable ..... 258, 260
Plate Glass ..... 258 to 260
Miters-Eave Trough ..... 679
Monarch Combination Stop and Waste ..... 528
Compression Basin Cocks ..... 348
Bibbs ..... 506
Stops ..... 524
Fuller Basin Cocks ..... 342
Bibbs ..... 501
Wash Tray Bibbs ..... 514
Monkey Wrenches ..... 799
Moore's Basin Cocks ..... 350
" Bibbs ..... 515
Moldings for Marble Slabs ..... 289
Moulds-Solder ..... 746
Mouthpieces-Speaking Tube ..... 683
Mueller Corporation Cocks ..... 533
Muriatic Acid ..... 692
N
Nail Heads ..... 675
Nationà Unions ..... 597
Nails-Roofing ..... 676
Naugatuck Balls ..... 492
Nautical Measure ..... 819
Neck Showers ..... 232
Necks-Stork ..... 498
Needle Shower Baths ..... 214 to 217
Nemo Hopper Closet ..... 55
Neptune Jr. Pump Water Closets ..... 70, 71
" Pump Water Closets ..... 68, 69
Never Split Closet Seats ..... 99
New Dome Siphon Jet Closet ..... 38
New Era Sink Brackets ..... 403
", ..... 402, 404
New Gem Siphon Jet Closet. ..... 28
Nippers-Cutting ..... 747
Nipples-Brass ..... 606
Hose ..... 712
Solder, Brass ..... 473
Lead ..... 470
Wrought ..... 600, 601
Non-Rusting Roofing Tin ..... 687
Nozzles-Hose ..... 702 to 704
Nuts-Brass ..... 151
Slip Joint ..... 477
Waste, Malleable ..... 592
Nye Pipe Dies ..... 773Oakum651
Offsets-Malleable ..... 591
Offsets-Soil Pipe ..... 640
Ohio Sink Traps ..... 360
Oil Cocks-Compression ..... 519
Oilers ..... 748, 74!
Oil-Three in One ..... 696
Oster Pipe Threading Machines. . . 763 to 765
Outlet Connections-Urinal ..... $.144,145$
Outlets-Eaves Trough ..... 679
Overflow Bath Tub Fittings ..... 206
Oxus Wash Down Siphon Closet ..... 50
P
Pacific Ship Water Closet ..... 73
Packing Chisels ..... 728
" -Rubber ..... 65 2
Wick, Asbestos ..... 693
Painters' Torches ..... 788
Pans-Closet, Copper ..... 108
Pantry Cocks ..... 351
Sinks-Copper ..... 405
" " -Porcelain ..... 375Paper-Asbestos405
693Parker's Combination Vises
" Parallel Vise792, 793
791
Parson's Trough Closets ..... 59, 60
Partitions-Marble ..... 290
Paste-Pipe Joint ..... 696a
Polishing ..... 695, 697
Patches-Hose ..... 710
Payne's Corporation Cocks ..... 533
Peerless Aluminum Enamel ..... 695
" Iron Enamel ..... 694
Pendants-Gas ..... 497
Philadelphia Hopper ..... 93
Pieces-Extension, Brass ..... 507
Malleable ..... 590
Soil Pipe ..... 639
Mouth, Speaking Tube ..... 683
Pig Lead ..... 689
Pillars-Brass ..... 494
Pinal Hopper Closet ..... 48
Pin Radiators ..... 457
Pins-Bending ..... 752
Turn ..... 738
Pipe Bands ..... 641
" Benders ..... 722,723
" Cutters ..... 732, 733
" Hangers ..... 620
" Hooks-Cast Iron ..... 620
" -Conductor ..... 681
" -Soil ..... 650
Joint Paste ..... 696a
" Reamers ..... 775
" Saddles ..... 615
" Straps ..... 650
" Tapping Machines ..... 676, 677
" Taps ..... 775
" Threading ..... 574
Pipe Threading Machines ..... 763 to 768
" Tongs ..... 796
" Wrenches 797 to 802
" -Brass ..... 663
Cast Soil ..... 628
Conductor ..... 680
Dipped ..... 574
Gas ..... 573, 574
Lead ..... 471
Soil ..... 471, 47؛
Tin ..... 472
Wrought ..... 573
Pipes-Blow ..... 752
Closet Flush ..... 101
Supply ..... 101
Hose ..... 702 to 704
Supply, Bath ..... 204
Lavatory ..... 352, 353
Urinal Waste ..... 145
Wash Down ..... 147
Waste, Continuous ..... 359
Placer Laundry Trays ..... 408
Plain Bibbs-Compression ..... 503, 505, 506
Fuller ..... 499, 501
Lever ..... 509, 510
Plain Couplings ..... 475
Plates-Bench ..... 716
Box ..... 498
Ceiling ..... 621
Cesspool ..... 427
Floor ..... 621
Hook ..... 620
Plugs and Couplings for Enameled Bath Tubs ..... 206
-Basin, Cast Brass ..... 480, 481
Stamped Brass ..... 479
Bath, Cast Brass ..... 480, 481
" Stamped Brass ..... 479
Brass, Pipe ..... 606
Cast Iron ..... 613
Drift ..... 738
Lavatory ..... 361
Malleable ..... 599
Rubber ..... 482
Sink, Cast Brass ..... 480, 481
. Stamped Brass ..... 479
Soil Pipe ..... 644
Testing ..... 752, 753
Wash Tray, Cast Brass ..... 480, 481
" " Stamped Brass ..... 479
Waste ..... 475
Plumb Bobs ..... 721
Plumbers' Friend ..... 729
" Hooks ..... 650
" Soil ..... 651
Plyers ..... 750 to 752
Polish-Bar ..... 697
" -Brilliantshine ..... 697
" for Enameled Ware ..... 694
" -Metal ..... 695 to 697
Polish-Sunshine ..... 696
Universal ..... 69.5
Polishing Paste ..... 695 to 697
Pomona Roofing Tin ..... 687
Porcela ..... 694
Porcelain Bath Tubs ..... 157 to 163
" Kitchen Sinks ..... 373, 374
" Laundry Trays ..... 406
" Lavatories ..... 269 to 273
Portable Shower Baths ..... 223
Posts-Flush Pipe ..... 106
Supply Pipe ..... 106
Pot Hooks ..... 739
Pots-Fire ..... 781
Solder ..... 745
Pressure Regulators ..... 559
Prick Punches ..... 754
Primus Fire Pots ..... 779
" Furnaces ..... 779
" Heaters ..... 789
" Torches ..... 787, 788
Princess Union Radiators ..... 454
Prison Closet and Lavatory ..... 54a
Prison Lavatories ..... 54a, 323
Properties of the Circle ..... 824
Public Urinals ..... 115 to 136
Pulis-Closet Tank ..... 109
Pumps and Gauges ..... 805
-Plumbers' Force ..... 803, 804
Testing ..... 805
Punches and Chisels ..... 753
-Hollow ..... 754
Prick ..... 754
Solid ..... 753
Push and Pull Valves ..... 517
Q
Quarter Bends-Soil Pipe ..... 629, 630
Circle Slabs-Marble ..... 286
R
Racking Cocks ..... 518
Racks-Hose ..... 714
Radiation-Cubic Feet of Air One Foot Will Heat ..... 826
Radiator Elbows ..... อ42
Radiators ..... 452 to 460
Regular Tapping ..... 458
Radiator Valves ..... 541, 542
Railing Fittings ..... 602 to 605
Railroad Freight Classification ..... 827, 828
Rails-Bath Tub Hand ..... 247
Shelf ..... 254a
Rainier Wash Out Closet ..... 45
Raised Brass Strainers ..... 483
Ramona Siphon Jet Closet ..... 26
Range Boilers 431 to 434
" Closets-Brighton ..... 64 to 67
Individual Bowl ..... 61 to 63
Parson's ..... 59, 60
Siphon Eduction ..... 58a, 58b
Rapid Instantaneous Water Heaters ..... 439
Rasps ..... 740
Ratchet Stocks and Dies ..... $.770,774$
Reamers-Pipe ..... 775
Receipts, etc ..... 815, 816
Receptors-Shower Bath, Enameled. ..... 213
Shower Bath, Porcelain .... 209 t ..... 212
Reducers-Brass ..... 606
Cast Iron ..... 612
Hose ..... 712
Malleable ..... 586
Soil Pipe ..... 642
Registers-Meter ..... 567
Regulators-Water Pressure ..... 559
Repairer-Closet ..... 108
Repairs-Fire Pot ..... 785, 786
Torch ..... 786
Rests-Cigar ..... 261
Soil Pipe ..... 644
Return Bends-Cast Iron ..... 616
Malleable ..... 588, 589
Ridge Cap ..... 674
Rings-Boiler ..... 434
Curtain ..... 233
Rubber, Slip Joint ..... 362
Shower ..... 232, 232a
Siphon, Rubber ..... 110
Rivets and Burrs-Number to the Pound ..... 814
-Copper ..... 658
Tinners' ..... 656 to 658
Rivet Sets ..... 754
Rod-Brass, Threaded ..... 151
Rods-Bronze ..... 667
Roofing-Corrugated ..... 673, 674
Material and Labor ..... 817, 818
Folders ..... 718
Double Seamers ..... 716, 719
Nails ..... 676
Tin ..... 686, 687
Tongs ..... 717, 718
Rosalia Siphon Jet Closet ..... $9,13,14,17$
Rosin ..... 692
Round Irons ..... 730
" Nose Chisels ..... 725
Way Stops ..... 529
Royal Roofing Tin ..... 686
" Union Radiators ..... 452
Rubber Bath Tub Mats ..... 265
" Bumpers ..... 112
" Packing ..... 652
" Stoppers ..... 482
Rubbers-Hinge ..... 112
Rules-Tinners' ..... 755
Runners-Joint ..... 755
Rush Siphon Jet Closet ..... 39

S
Saddle Hubs-Soil Pipe ..... 641
Saddles-Pipe ..... 615
Safety Chain ..... 488
Safe Wastes ..... 482
Salts-Soldering ..... 692
Sand's Pump Water Closet ..... 76
Sanitary Tees-Soil Pipe ..... 633 to 635
Saunders' Pipe Cutters ..... 733
" " Vise ..... 795
Saws-Compass ..... 756
Double Edge ..... 756
Hack ..... 756a
Single Edge ..... 756
Scepter Radiators ..... 456
Scott Gate Valves ..... 545
Scratch Awls ..... 719, 720
Scratches-Match ..... 261
Screwdrivers ..... 734
Screws-American Long ..... 599
Ball Cock ..... 110
Closet ..... 107
Deck ..... 475
Trap ..... 475
Seamers-Roofing ..... 716,719
Seat Brackets ..... 370
Seats-Bath Tub ..... 264, 264a
Closet ..... 97 to 100
Never-Split, Closet ..... 99
Siphon ..... 110
Sectional Lavatories ..... 324 to 331
Self-Closing Basin Cocks. ..... 349, 350
" Bibbs ..... 515, 516
" Cooler Cocks ..... 516
" Stops ..... 525
Sets-Lavatory ..... 263
Rivet ..... 754
Service Clamps or Sáddles ..... 615
Cocks-Brass ..... 530, 531
" " -Iron ..... 531
Sewer Valves ..... 648a
Shampoo Cocks ..... 346
" Sprays ..... 231
Shampoos ..... 227
Shave Hooks ..... 739
Shears and Crimpers ..... 760, 761
-Bench ..... 762
Double Cutting ..... 761
Elbow ..... 762
Hawk's Bill ..... 760
Tinners' Hand ..... 757 to 759
Sheet Brass ..... 664
Copper ..... 665, 666
Iron ..... 670 to 672
" Fire Pots ..... 778
Lead ..... 472
Tin ..... 472
Zinc ..... 687, 688
Sheffy Pipe Wrench ..... 798
Shelf Rails ..... $.254 a$
Shelves-Towel, Nickel Plated ..... 250
Towel, Opal Glass ..... 254
Plate Glass ..... 253, 254
Ship Closet-Atlantic ..... 74
Columbia ..... 72
Dandy ..... 77
Delaware ..... 75
H. M. \& S ..... 79
Knockabout ..... 78
Neptune ..... 68, 69
Jr ..... 70, 71
Pacific ..... 73
Sand's ..... 76
Ship Lavatories-Enameled ..... 322
Folding ..... 339 to 341
Shower Bath Receptors ..... 209 to 213
" " Curtains ..... 233
Baths ..... 214 to 226
" -Portable ..... 222a, 223
Curtain Snaps ..... 233
" Heads 228 to 230a
Rings ..... 232, 232a
Showers-Neck ..... 232
Sidewalk Box Covers ..... 428
" Boxes ..... 428
Single Hubs ..... 643
Sill Cocks ..... 535
Sink and Wash Tray Combinations..386, 387
Sink Backs-Cast Iron, Enameled...396, 397
-Steel ..... 404
Bolts ..... 398
" Brackets-Brass ..... 398
" -Campbell ..... 397
" -Enameled ..... 398
" -New Era ..... 403
" -Painted ..... 398
" Connections ..... 361
" Couplings ..... $399,401,403$
" Drain Boards ..... 394
" Gaskets ..... 362
" Grating ..... 395
" Mats ..... 395
" Plugs ..... 479 to 481
" Strainers ..... 399, 401, 403
" Traps ..... 358 to 360
Sinks-Enameled Corner ..... 393
Half Circle ..... 393
Patent Overflow ..... 392
" Kitchen, Flat Rim.391, ..... 392
66 With Drain Board.379-385
Factory Wash ..... 390
Galvanized ..... 404
Kitchen, Columbus ..... 400
Enameled 377 to 393
New Era ..... 402, 404
Porcelain 372 to ..... 376
Pantry, Copper ..... 405
Porcelain ..... 375
Steel ..... 405
Sinks-Slop, Enameled ..... 415 to 419
Painted ..... 419
Wash, Enameled ..... 332 to 336
Siphon Eduction Closet Range.......58a, 58b
" Rings ..... 110
" Seats ..... 110
Siphons-Goose Neck ..... 110
Sisson Insertable Joints ..... 649
Sitz Baths-Enameled ..... 190 to 192
Porcelain ..... 162
Sixteenth Bends ..... 632
Sixth Bends ..... 631
Slabs-Marble, for Closet ..... 106
Marble ..... 290
Slab Zinc ..... 689
Sleeves-Brass ..... 477
Cast Iron ..... 643
Slip Joint Angle Supply Valves ..... 103
" Closet Supplies ..... 102
" Flush Pipe Elbows ..... 105
" Lavatory Plugs ..... 361
" Nuts ..... 477
" Rings ..... 362
" Straight Supply Valves ..... 103
" Supply Pipe Elbows ..... 491
Slip Joints-Elbow ..... 491
Straight ..... 204
Slop Hoppers ..... 423, 424
" Sinks ..... 415 to 419
Snaps-Chain ..... 489
Curtain ..... 233
Snips-Circular ..... 759
Tinners' ..... 757 to 759
Soap and Tumbler Holders ..... 238 to 241
" " Sponge Holders ..... 243, 244
" Dishes-Marble ..... 289
Nickel Plated ..... 234 to 244
Porcelain ..... 262
Soap Holders-Porcelain ..... 262
Sockets-Boiler ..... 593
Malleable ..... 587
Wrought ..... 587
Soil Brushes ..... 723
" Cups ..... 728
" Pipe Fittings ..... 629 to 649
" " Hooks ..... 650
" " Straps ..... 650
" " -Cast ..... 628
" " -Lead ..... 471, 472
Soil-Plumbers ..... 651
Solder Coppers ..... 729, 730
" Copper Handles ..... 730
" Moulds ..... 746
" Nipples-Brass ..... 473
" -Lead ..... 470
Solder Pots ..... 745
" Unions ..... 473
Soldering Salts ..... 692
Solder-Electric ..... 691
Spelter ..... 690
Solder-Tinners' ..... 690
Wiping ..... 691
Wire ..... 690
Solid Punches ..... 753
Sonoma Closet ..... 16
Sovereign Union Radiators ..... 457
Speaking Tube Elbows ..... 682
" Tube ..... 682
Specific Gravity ..... 810
" " of Various Materials ..... 810
" " " Liquids ..... 811
" " " Metals ..... 811
811
Spelter-Slab ..... 689
" Solder ..... 690
Split Links ..... 489
Sponge and Bath Brush Holders.. 242 to 244
Holders-Nickel Plated .... 242 to 245
-Porcelain ..... 262
Sprays-Bath ..... 231, 233
Bath Massage ..... 232a
Shampoo ..... 231
Sprinkler Heads ..... 230
Sprinklers-Hose .702 to 704
Lawn ..... 704 to 708
Square Measure ..... 819
Stall Bolts ..... 151
" Clamps ..... 147, 148
Door Bolts ..... 153
" Stops ..... 153
Hinges ..... 153
Stalls-Urinal ..... 115 to 128
Standards-Brass Railing ..... 149,150
Stands-Boiler Adjustable ..... 435
Boiler Lockwood ..... 435
Menlo ..... 435
Hose ..... 708
Stanwood Pipe Cutter ..... 733
Stays-Chain ..... 484 to 486
Steam Traps ..... 570
Steel Bath Tubs ..... 196 to 198
" Sinks-Columbus ..... 400, 405
New Era ..... 402, 404
Stems and Balls-Fuller ..... 502
" -Float or Ball ..... 110
Stench Traps ..... 426
Sticks-Bossing ..... 738
Stillson Pipe Wrenches ..... 797
Stocks and Dies ..... 769 to 794
Armstrong ..... 771
Duplex ..... 769, 770
Holland ..... 772, 774
Ratchet ..... 770, 774
Stops and Waste ..... 527 to 529
Stop Cocks ..... 523 to 529
Gas ..... 494
Stoppers-Rubber ..... 482
Stops-Compression ..... 523, 524
Doherty ..... 525
Door ..... 153
Stops-Lever Handle ..... 526, 527
Shower ..... 528
Loose Key ..... 524
Moore's ..... 525
Round Way ..... 529
Tee Handle ..... 529
Stork Necks ..... 498
Stove Bolts ..... 655
Strainers-Conductor ..... 682
Convex ..... 478
Fancy ..... 478
Plain ..... 478
Raised ..... 483
Urinal Trough ..... 483
Water Meter ..... 568
Straps-Bath Tub ..... 264
Flush Pipe ..... 106
Hose ..... 710
Supply Pipe ..... 106
Street Elbows ..... 578
" Washer Boxes ..... 428
" Washers ..... 713
Suggestions for Architects ..... 18
Sunburst Shower Baths ..... 222a
Sunshine Polish ..... 696
Supplies-Slip Joint ..... 102
Supply and Waste Fittings ..... 207
" Pipe Elbows ..... 491
" Posts ..... 106
" Straps ..... 106
Pipes-Bath ..... 204
" -Closet ..... 101
" -Lavatory ..... 352, 353
Supply Valves-Angle ..... 103, 104
Slip Joint ..... 103
Supports-Apron ..... 368
Sure Grip Bulbs ..... 231
Surface Drains ..... 426
Swing Basin Cocks ..... 346
" Towel Bars ..... 250a, 251
T
Tack Bumpers ..... 112
Tacks-Lead ..... 470
Tin ..... 677
Tank Board Clamps ..... 109
" Boards ..... 109
" Brackets ..... 370
" Heaters-Menlo ..... 444
" Lock Threads ..... こ.99
Tanks-Closet, Parts of ..... 109, 110
Hot Water ..... 434
Rectangular, Capacity of ..... 808
Round, Capacity of ..... 807
Urinal, Automatic ..... 146
Water Closet ..... 94 to 96
Enameled ..... 95
" " Low Down ..... 96
Tap Borers ..... 721, 722
Tapping Machines ..... 776, 777
Taps-Pipe ..... 775
Tee Handle Stops ..... 529
Tees-Brass ..... 606
Branch ..... 619
Cast Iron ..... 608 to 610
Closet ..... 625
Drainage ..... 623
Hand Rail ..... 603
Long Radius ..... 618
Malleable ..... 581 to 584
Railing ..... 602
Soil Pipe ..... 632 to 635
Union ..... 595
Telegraph Basin Cocks ..... 350
" Bibbs ..... 516
" Cooler Cocks ..... 516
Testing Plugs ..... 752, 753
" Pumps ..... 805
Thatcher Basin Cocks ..... 349
Threading Pipe ..... 574
Threads-Number to an Inch ..... 814
Tank Lock ..... 599
Three in One ..... 696
Throttle Valves ..... a44
Tiber Wash Down Siphon Closet ..... 11
Tigris Siphon Jet Closet ..... 51
Tin-Bar ..... 690
Charcoal Sheet ..... 684 to 687
Coke ..... 685, 686
Perforated ..... 659
Pig ..... 690
Roofing ..... 686, 687
Sheet ..... 472
Tin Pipe ..... 472
Tinners' Rules ..... 755
" Snips ..... 757 to 759
" Vises ..... 791
Tips-Gas ..... 497
Tobin Bronze ..... 667
Togo Wash Down Siphon Closet ..... 43
Toilet Paper Boxes ..... 256
" " Holders ..... 257, 262
Tongs-Crimping ..... 762
Gutter ..... 718
Pipe ..... 796
Roofing ..... 717, 718
Tool Bags ..... 721
Tooth Brush and Tumbler Holders. 239 to 241
" " Holders ..... 241
" Powder Receptacles ..... 245
Torch Repairs ..... 786
Torches-Braziers' ..... 781 to 784
Clayton \& Lambert ..... 780 to 783
Coal Oil ..... 787, 788
Gasoline ..... 780 to 785
Painters' ..... 788
Plumbers' ..... 741
Primus ..... 787, 788
Torches-Vulcan ..... 784
Torrance Basin Cocks ..... 342
Towel Bars ..... 247 to 253
Baskets ..... 246a, 247
Shelves-Nickel Plated ..... 250
-Opal Glass ..... 254
-Plate Glass ..... 253, 254
Townsend Closet ..... 86
Trap Covers ..... 643
Screw Ferrules-Brass ..... 476
477
Trap Screws ..... 475
With Floor Drain ..... 426
Traps-Bag ..... 355
Bath Tub ..... 206
Bell ..... 484
Drainage ..... 627
Drum, Cast Iron ..... 644
Enameled ..... 644
Lead ..... 467
Fish ..... 568
Grease ..... 420 to 422
Enameled ..... 420
Iron, Painted ..... 420
Stone ..... 421
Nickel Plated ..... 421
Lavatory ..... 355 to 357
Lead ..... 463 to 467
Sink ..... 358 to 360
Soil Pipe ..... 645 to 648
Steam ..... 570
Stench ..... 426
Urinal ..... 144
Trays-Laundry ..... 406 to 414
Cement ..... 413
Enameled ..... 409 to 412
Galvanized .....  .414
Lincoln ..... 407
Placer ..... 408
Porcelain ..... 406
Trimmings for Compression Work ..... 508
Fuller Work ..... 502
Trimo Basin Wrench ..... 802
Pipe Wrench ..... 797
Tripod-Hose ..... 708
Trough Closet-Parson's ..... 9, 60
Eaves ..... 678
Troy Weight ..... 821
Tube-Speaking ..... 682
Tubing-Brass ..... 662, 663
Rubber ..... 701
Tubs-Bath, Iron Enameled ....... 164 to 193Solid Porcelain ..... 157 to 163Steel, Copper Lined...... 196
Enameled ..... 197, 198
Zinc ..... 199
Tumbler Holders ..... 238
Tuma Closet ..... 15
Turn Pins ..... 738
U
Union Boiler Sockets ..... 593
" Elbows ..... 594
" Radiator Valves ..... 542
" Tees ..... อ95
Unions-Brass ..... 606
Erie ..... 597
Flange ..... 614
Malleable ..... 596, 597
National ..... 597
Solder ..... 473
Universal Soil Pipe Plugs ..... 752
Upright Y Branches. ..... 634a
U. S. Gate Valves ..... 544
Urinal Baskets ..... 145
" Cocks ..... 142, 143
" Inlet Connections ..... 144,145
" Outlet ..... 144, 145
" Stall Gutters ..... 147
" Stalls 115 to 128
" "-Porcelain ..... 127, 128
" Tanks ..... 146
" Traps ..... 144
" Wash Down Pipes ..... 147
" Waste Pipes ..... 145
Urinals-Corner ..... 140, 141
Enameled ..... 141
Flat Back ..... 139, 141
Lipped ..... 139 to 141
Pedestal ..... 137
Porcelain ..... 139, 140
Public 129 to 136
Siphon Eduction ..... 129 to 132
" Jet ..... 138
Speakman ..... 124 to 126
Wash Out, Public ..... 133 to 135
Urn Cocks ..... 519
v
Valve Boxes-Adjustable ..... 555
Valves-Angle ..... 536 to 539
Angle Supply ..... 104
Back Water ..... 648a
Check ..... 540
Closet, Flushometer ..... 7
Float ..... 521, ..... 522
Flushometer ..... 8
Garden ..... 534
Gas Log ..... 538
Gate, Brass ..... 544
Flushometer ..... 8
Iron Body ..... 545
Globe ..... 536 to 539
Hopper ..... 517
Hose ..... 543
Jenkins ..... 539
Valves-Ludlow, Air ..... 555
" Float ..... 555
" Gate ..... 546 to 554
Pump ..... 660
Push and Pull ..... 517
Quick Opening ..... 550
Radiator, Detroit ..... 541
" Jenkins ..... 542
Sewer ..... 648a
Sliding Stem ..... 550
Thermostatic, Lawson ..... 437
Throttle ..... 544
Varnish-Asphaltum ..... 694
Ventilating Boxes ..... 427
" Branches-Soil Pipe ..... 638
" Caps ..... 642
Vertical Check Valves ..... 540
Vises-Angle Plate ..... 793
Armstrong ..... 795
Chain ..... 790
Combination, Parker's ..... 792, 793
Diamond ..... 790
Hinged, Pipe ..... 794, 795
Keystone, Pipe ..... 794
Parker's ..... 791 to 793
Parallel ..... 791
Pipe ..... 790 to 795
Saunders Pipe ..... 795
Tinners ..... 791
Vulcan Chain ..... 790
With Drilling Attachment ..... 790
Volga Wash Down Siphon Closet ..... 42
Vulcan Chain Pipe Vises ..... 790
" " Tongs ..... 796
" Torches ..... 784
W
Wainscoting-Marble ..... 290
Wall Registers ..... 457
Warnock Wrenches ..... 802
Wash Cloth Holders ..... 246
" Down Pipes ..... 147
Washer Cutters ..... 731
Washers and Waste ..... 475
Basin Cock ..... 362
Bibb ..... 508
Buggy ..... 714
Closet ..... 107
Hose ..... 709
Lead ..... 676
Nickel Plated ..... 151
Slip Joint Rubber ..... 362
Street ..... 713
Waste, rubber ..... 362
Wash Sinks-Enameled ..... 332 to 336
Painted, Factory ..... 390
Wash Tray Bibbs .512 to ..... 514
Wash Tray Bibbs-Monarch ..... 514
Chains ..... 489
Plugs 479 to 481
Trays-Laundry ..... 406 to 414
Waste-Cotton ..... 651
" Nuts-Malleable ..... 592
Pipes-Continuous ..... 359
Plugs ..... 475
Washers ..... 362
Wastes and Washers ..... 475
Wastes-Bath Tub ..... 205 to 207
Lavatory ..... 354
Safe ..... 482
Water Boilers ..... 445 to 451
Water Closet-Ajax ..... 47
Alameda ..... 46
Alfa ..... 32
Alma ..... 34
Anti-freezing ..... 57, 58
Atlantic ..... 74
Auto ..... 54
Boston ..... 30
Brighton ..... 64 to 67
Chino ..... 41
Columbia ..... 72
Dandy ..... 77
Delaware ..... 75
Eddy ..... 40
Elbe ..... 52
Flushometer ..... 3 to 25
Gila ..... 53
Gnu ..... 36
Hilo ..... 44
H. M. \& S. Ship ..... 79
Individual Bowl ..... 61 to 63
Indus ..... 49
Jumbo ..... 12
Kelly ..... 56 to 58
Knockabout ..... 78
Latona ..... 10
Nemo ..... 55
Neptune ..... 68, 69
Jr ..... 70, 71
New Dome ..... 38
New Gem ..... 28
Oxus ..... 50
Pacific ..... 73
Parsons ..... 58, 59
Pinal ..... 48
Prison ..... 54a
Rainier ..... 45
Ranges 58a to 67
Range, Brighton ..... 64 to 67
Individual Bowl ..... 61 to 63
" Parson's ..... 58, 54
Siphon Eduction 58a, 58b
Ramona ..... 26
Rosalia ..... $9,13,14,17$
Rush ..... $3 y$
Sands ..... 76
Water Closet-Sonoma ..... 16
Tiber ..... 11
Tigris ..... 51
Togo ..... 43
Tuma ..... 15
Volga ..... 42
Water Closet Bowls ..... 82 to 88
" " Tanks ..... 94 to 96
-Enameled ..... 95
" -Low Down. ..... 96
Filters 714a to 715
Heaters-Crescent ..... 440, 441
Instantaneous ..... 439 to 442
Lawson, Gas ..... 436
Gasoline ..... 443
Menlo ..... 444
Rapid ..... 439
Water Meters ..... 560 to 566
Weight-Apothecaries ..... 821
Avoidupois ..... 821
Metric ..... 822, 823
Troy ..... 821
Weight of Block Tin Pipe ..... 813
Copper-How to Obtain ..... 812
" Iron-How to Obtain ..... 812
Liquids ..... 811
Lumber ..... 812
" " Metals ..... 811
" Sheet Copper ..... 812
" Timber ..... 811
" Various Materials. ..... 810
Weights-Miscellaneous ..... 812
Table of ..... 813
Wharf Hydrant ..... 543
Whisk Broom Holders ..... 245, 262
Whistles-Speaking Tube ..... 683
Wing Dividers ..... 734
Wiping Cloths ..... 728
Solder ..... 691
Wire Chisels ..... 724
Gauges ..... 742
Solder ..... 690
-Brass ..... 662
Copper ..... 662
Iron ..... 660, 661
Wood and Stone Measure ..... 819
Chisels ..... 726
Wrenches-Alligator ..... 799
Atlas ..... 798
Basin ..... $80 \check{ }$
Black Screw ..... 799
Elgin ..... 799
For N. P. Tubing ..... 802
Headson ..... 801
McKercher ..... 800
Pipe 797 to ..... 80:
Sheffy ..... 798
Stillson ..... 797
Trimo ..... 797
Wrenches-Warnock ..... 802
Wrights' ..... 798
Wright's Pipe Wrenches ..... 798
Wrought Pipe ..... 573
x
X-Ray Radiators ..... 457
Y
Yankee Jaws ..... 800
Yarning Chisels ..... 728
Y Branches-Cast Iron ..... 617
Drainage ..... 624
Malleable ..... 580
Soil Pipe ..... 636 to 638
Y'S-Cast Iron ..... 617
Drainage ..... 624
Malleable ..... 580
Soil ..... 636 to 638
Z
Zinc Bath Tubs ..... 199
" Balls ..... 109, 493
" -Gauges of ..... 688
Sheet ..... 687, 688
Slab ..... 689

Suggestions for the Arrangement

OF

## MODERN BATHROOMS



# Holbrook, Merrill \& Stetson <br> INCORPORATED. 

SAN FRANCISCO, LOS ANGELES AND NEW YORK.

## HOLBROOK, MERRILL \& STETSON.

## BATHROOM DESICN A.

Illustrated on Next Page.

CLOSET-Holbrook, Merrill \& Stetson, 94-C, Tigris Porcelain Enameled inside and out- side; Siphon Jet Bowl with Oak Seat and Cover, Oak Zinc-lined Tank and Nickel- Plated Angle Supply with Nickel-Plated Slip Joint Valve ..... $\$ 29.50$
BATH—Holbrook, Merrill \& Stetson, 5-foot, 622-C, 43/4-inch Roll Rim, Porcelain Enameled Bath, with Exterior finished in No. 1 Zinc White and 666-C "Festoon" Border, with Nickel-Plated Imperial Bell Supply and Waste Fittings ..... 105.50
SHOWER BATH AND RECEPTOR-Nickel-plated Combination Shower and Needle Bath, with Liver Sprays, Mixing Chamber, Thermometer and Rubber Curtain; Holbrook, Merrill \& Stetson, 730-C Porcelain Enameled 36x36-inch Receptor, with Exterior finished in No. 1 Zinc White and 666-C "Festoon" Border222.00
SITZ BATH—Holbrook, Merrill \& Stetson, 659-C, 3-inch Roll Rim, Porcelain Enameled Sitz Bath, with 5 -inch Extension Arm on sides and Nickel-Plated Imperial Five- valve Bell Supply and Waste Fittings, with Liver Spray and Bidet, Exterior finished in No. 1 Zinc White and 666-C " Festoon" Border ..... 108.75
Note-Sitz Bath shown in Bathroom Desi yn A, is 69.0-C, except with Five-valve ImperialBell Supply and Waste Fittings and Liver Spray and Bidet, instead of regular pattern of BellSupply and Waste Fittings for Hot and Cold Water.
F00T BATH-Holbrook, Merrill \& Stetson, 660-C, $21 / 2$-inch Roll Rim, Porcelain Enameled Foot Bath, with Exterior finished in No. 1 Zinc White and 666-C "Festoon" Border, with Nickel-Plated Imperial Bell Supply and IVaste Fittings ..... 47.50
Lavatory-Holbrook, Merrill \& Stetson, 1068-C, 22x33 Porcelain Enameled Lavatory and Pedestal, Enameled all over, with Nickel-Plated "Colonial" Pattern Monarch Fuller Basin Cocks with China Handles marked Hot and Cold, Nickel-plated Supply Pipes, Trap and Waste to wall ..... $+9.50$
miscellaneous trimmings-All Brass Nickel-Plated :
3-Arm Swing Towel Bar, 912-C. ..... 1.75
Glass Bath Bar, 24 inches long, $920-\mathrm{C}$. ..... 3.00
Towel Basket, 889-C ..... 11.00
Sponge Holder, 878-C. ..... 1.60
Bath Tub Soap Dish, 843-C ..... 1.60
Toilet Paper Holder, 946-C ..... 1.35
Total Approximate Cost ..... $\$ 583.05$

## BATHROOM INTERIORS.



BATHROOM DESIGN-A. Description and Approximate Prices on Opposite Page.


# BATHROOM DESIGN B. 

Illustrated on Next Page.

CLOSET-Holbrook, Merrill \& Stetson, 96 -C, Elbe Porcelain Enameled inside and outside; Wash Down Siphon Bowl with Oak Seat and Cover, Oak Zink-lined Tank and Nickel-Plated Angle Supply with Nickel-Plated Slip Joint Valve
BATH—Holbrook, Merrill \& Stetson, 5-foot, 644 -C, 3 -inch Porcelain Enameled Bath, with Nickel-Plated Fuller Double Bath Cock, Supply Pipes and Imperial Waste ..... 45.25
For No. 1 Zinc W'hite Exterior Finish and Gold Lines, add ..... $\$ 21.00$
SHOWER-Holbrook, Merrill \& Stetson, 772-C, Nickel-Plated Portable Shower Bath with Rubber Curtain ..... 15.00
FOOT BATH—Holbrook, Merrill \& Stetson, 660-C, 3-inch Roll Rim Porcelain Enameled Foot Bath, with Nickel-Plated Bell Supply and Waste Fittings ..... 34.00
For No. 1 Zinc White Exterior Finish and Gold Lines, add ..... $\$ 9.50$
LAVATORY-Holbrook, Merrill \& Stetson, $18 \times 27$, 1070-C, Porcelain Enameled all over, Lavatory on Brackets with Colonial Pattern Monarch Fuller Basin Cocks with China Handles marked Hot and Cold, Nickel-Plated Supply Pipes, Imperial Waste and Elliptical Trap to Wall ..... 37.00
MISCELLANEOUS TRIMMINGS—Brass Nickel-Plated:
Mirror, $16 \times 24$ inches, 955 -C ..... 14.00
Glass Shelf, 928-C ..... 7.50
Wall Soap Dish, 835-C ..... 1.50
Towel Bar for Lavatory, 30 inches long, 902-C ..... 2.00
Towel Bar for bath, 30 inches long, 901-C ..... 1.35
Coat Hook, 933-C ..... 50
Toilet Paper Holder, 949-C ..... 1.50
Soap and Sponge Holder, 871-C. ..... 3.20
rotal Approximate Cost ..... $\$ 189.40$


In Orders and Specifications give Plate Numbers.

## HOLBROOK, MERRILL \& STETSON.

## BATHROOM DESIGN C.

Illustrated on Next Page.

CLOSET—Holbrook, Merrill \& Stetson, 96-C, Elbe Porcelain Enameled inside and Painted outside; Wash Down Siphon Bowl with Oak Seat and Cover, Oak Zinc-lined Tank with Nickel-Plated Supply with Slip Joint Valve ..... $\$ 26.60$
BATH-Holbrook, Merrill \& Stetson, 5-foot, 639-C, 3-inch Porcelain Enameled Bath with Nickel-Plated Fuller Double Bath Cock, Supply Pipes and Connected Waste and Overflow ..... 40.50
For No. 1 Zinc W'hite Exterior Finish, add ..... $\$ 16.00$
LAVATORY—Holbrook, Merrill \& Stetson, $18 \times 24$ inches, 1072 -C, Porcelain Enameled Exterior Lavatory on Porcelain Enameled Brackets, with Nickel-Plated Low Pattern Compression Faucets with China Indexes, Supply Pipes with Slip Joint Valves, and H., M. \& S. Vented Adjustable "P" Trap ..... 21.25
NOTE-Lavatory shown in Bathroom Design C, is 1072-C, except that it has Keystone Waste, Low Pattern Compression Basin Cocks instead of Torrance Basin Cocks and Vented " P " Trap instead of Plain " P " Trap.
MISCELLANEOUS TRIMMINGS-Brass Nickel-Plated:
Mirror, $13 \times 20$ inches, 95\%-C ..... 11.00
Opal Glass Shelf, 20 inches, 926 -C. ..... 4.10
Whall Soap Dish, 828-C ..... 1.50
Towel Hooks, 932-C ..... 2.25
Towel Bar, 30 inches long, $902-\mathrm{C}$ ..... 2.00
Coat Hook, 933-C .....  50
Toilet Paper Holder, 94is-C ..... 40
Bath Tub Soap Dish, 843-C ..... 1.60
Total Approximate Cost ..... $\$ 111.70$


## BATHROOM DESIGN D.

Illustrated on Next Page.
CLOSET-Holbrook, Merrill \& Stetson, 76-C, Volga Plain Wash Down Siphon Vitreous China Bowl with Oak Seat and Cover and Oak Tank with Nickel-Plated Supply Pipe
NOTE-Closet as shown in Bathroom Design D, is $76-C$, except that it has Plain Supply to floor instead of Angle Supply with Valve.
BATH—Holbrook, Merrill \& Stetson $51 / 2$-foot, 653 -C, 3 -inch Roll Rim Porcelain Enameled Menlo Bath, with Nickel-Plated Fuller Double Bath Cock, Offset Supply Pipes and Connected Waste and Overflow ..... 39.00
For No. 1 Zinc White Exterior finish, add ..... $\$ 16.00$
LAVATORY—Holbrook, Merrill \& Stetson, 1083-C, Porcelain Enameled Exterior Lavatory, with Nickel-Plated Keystone Waste and Soap Dish; Low Pattern Compression Basin Cocks; Supply Pipes to wall and "P" Trap. ..... 21.00
For Lavatory Enameled all over, add ..... $\$ 2.00$NOTE-Lavatory as shown in Bathroom Design D, is 1083-C, except that it has LowPattern Compression Basin Cocks with Supplies to wall instead of No. 0 FullerBasin Cocks with Supplies to floor.
MISCELLANEOUS TRIMMINGS—Brass, Nickel-Plated :
Mirror, 2-16x24 inches, 954 -C ..... 28.00
Opal Glass Shelf, 20 inches long, 926 -C ..... 4.10
Opal Glass Towel Bar, 18 inches long, 916-C ..... 2.50
Coat Hook, 933-C ..... 50
Bath Tub Soap Dish, 842-C ..... 1.00
Toilet Paper Holder, 945-C ..... 40
Total Approximate Cost. ..... $\$ 119.00$

## BATHROOM INTERIORS.



Description and Approximate Prices on Opposite Page.

## BATHROOM DESICN E.

Illustrated on Next Page.


#### Abstract

CLOSET-Holbrook, Merrill \& Stetson, 98-C, Porcelain Enameled inside and outside; Washout Bowl with Oak Seat and Cover, and Oak Tank and Tank Board with NickelPlated Flush Pipe, Supply Pipe and Chain and Pull.


NOTE-Closet as shown in Bathroom Design E, is $98-\mathrm{C}$, except that it has Supply Pipe to floor instead of Angle Supply Pipe with Valve.
BATH-Holbrook, Merrill \& Stetson, 5-foot, 637-C, $13 / 4$-inch Roll Rim Porcelain Enameled Bath Tub, with Nickel-Plated Fuller Double Bath Cock, Supply Pipes and Connected Waste and Overflow.
For No. 1 Zinc W'hite Exterior Finish, add.................................................. $\$ 16.00$

LAVATORY-Holbrook, Merrill \& Stetson, $20 \times 24$ inches, 1098-C, Porcelain Enameled Inside Lavatory with Concealed Wall Hanger, Nickel-Plated No. 0 Monarch Fuller Basin Cocks, Plain Supply Pipes to wall and Vented " P" Trap.

NOTE-Lavatory shown in Bathroom Design E, is 1098-C, except that it has Wall Hanger, Plain Supply Pipes and Vented Trap, instead of Brackets, Supply Pipes with Valves and Plain " P" Trap.
MISCELLANEOUS TRIMMINGS-Brass Nickel-Plated:
Mirror, $18 \times 30$ inches, 954 -C. ..... 16.00
Glass Combination Shelf, 928-C ..... 7.50
Towel Bar, 24 inches long, 900-C. .....  85
Coat Hook, 933-C. ..... 50
Toilet Paper Holder, 948-C .....  50
Bath Tub Soap Holder, 841-C. ..... 65
Total Approximate Cost. ..... $\$ 105.25$


In Orders and Specifications give Plate Numbers.

## BATHROOM DESIGN F.

Illustrated on Next Page.

CLOSET-Holbrook, Merrill \& Stetson, 72-C, Eddy Plain Siphon Pinnacle Jet Vitreous China Bowl, with Oak Seat and Cover and Oak Tank with Marble Top and Nickel-Plated Supply Pipe to floor with Stop

NOTE-Closet shown in Bathroom Design F is $22-C$ except that it has Marble Top
Tank and Supply Pipe with Stop instead of Wood Top Tank and Supply without
Stop.
BATH—Holbrook, Merrill \& Stetson, 5-foot, 632-C, 3-inch Roll Rim Porcelain Enameled Bath with Exterior fimished in No. 1 Zinc White, 5-inch extension at Fitting End, with Nickel-Plated Imperial Supply and Waste Fittings.83.00
SHOWER-Holbrook, Merrill \& Stetson, 765-C, Nickel-Plated Shower Bath, with Curtain Ring and Rubber Curtain and Shampoo Attachment. ..... 42.50
NOTE-Shower shown in Bathroom Design F is 765 -C except that it has Curtain Ring and Curtain.
SITZ BATH-Holbrook, Merrill \& Stetson, 657-C, 3-inch Roll Rim, Porcelain Enameled Sitz Bath, with Exterior finished in No. 1 Zinc White, with Nickel-Plated Imperial Bell Supply and IVaste Fittings. ..... 57.50
LAVATORY-Holbrook, Merrill \& Stetson, $18 \times 27$ inches, $1070-C$, Porcelain Enameled all over Lavatory on Nickel-Plated Legs and Frame, with Torrance Pattern Fuller Basin Cocks with China Handles and Indexes. Plain Supply Pipes to wall; Imperial Waste and Elliptical "p" Trap ..... 45.50
NOTE-Lavatory shown in Bathroom Design F is $1070-\mathrm{C}$ except that it has Plain Supply Pipes instead of Supply Pipes with Valves.
miscellaneous fittings-Brass, Nickel-Plated:
Mirror, 21 x 30 inches, $955-\mathrm{C}$ ..... 23.00
Glass Towel Shelf and Bar, 24 inches long, $924-\mathrm{C}$ ..... 12.00
Class Towel Bar, 24 inches long, 918 -C ..... 4.00
Coat Hook, 933-C ..... 50
Brush Tray, 884-C ..... 2.25
Tooth Brush Holder, 866-C ..... 1.25
Wall Soap Dish, 836-C ..... 2.00
Towel Basket, 889-C ..... 11.00
Combination Soap and Sponge Holder, 871-C ..... 3.20
Toilet Paper Holder, 949-C ..... 1.50
Total Approximate Cost ..... $\$ 319.70$


BATHROOM DESIGN-F. Description and Approximate Prices on Opposite Page.


# HOLBROOK, MERRILL \& STETSON. 

## BATHROOM DESIGN G.

## Illustrated on Next Page.

CLOSET-Holbrook, Merrill \& Stetson, $96-\mathrm{C}$, Elbe Porcelain Enameled inside and outside; Wash Down Siphon Bowl, with Oak Seat and Cover, Oak Zinc-lined Tank and Nickel-Plated Angle Supply with Nickel-Plated Slip Joint Valve ..... $\$ 23.60$
BATH-Holbrook, Merrill \& Stetson, 5-foot, 632-C, 3-inch Porcelain Enameled Bath with Nickel-Plated Bell Supply and Waste Fittings ..... 67.00
For No. 1 Zinc White Exterior Finish, add. ..... $\$ 16.00$
SHOWER-Holbrook, Merrill \& Stetson, $765-\mathrm{C}$, Nickel-Plated Shower Bath, with Curtain Ring and Rubber Curtain and Shampoo Attachment ..... 42.50NOTE-Shower shown in Bathroom Design G, is $765-\mathrm{C}$, except that it has CurtainRing and Curtain.
SITZ BATH—Holbrook, Merrill \& Stetson, 659-C, 3-inch Roll Rim Porcelain Enameled Sitz Bath, with Nickel-Plated Bell Supply and Waste Fittings. ..... 5.). 00
For No. 1 Zinc White Exterior Finish, add. ..... $\$ 10.50$
LAVATORY-Holbrook, Merrill \& Stetson, $18 \times 27$ inches, $1070-\mathrm{C}$, Porcelain Enameled all over Lavatory on Nickel-Plated Legs and Frame, with Nickel-Plated Colonial Pattern Monarch Fuller Basin Cocks with China Handles marked Hot and Cold, Supply Pipes with Slip Joint Valves, Imperial Waste and Elliptical Trap to Wall.... ..... 4.). 50
MISCELLANEOUS TRIMMINGS--Brass Nickel-Plated:
Mirror, $18 \times 30$ inches, $95+$-C. ..... 16.00
Glass Shelf, $2+$ inches long, $922-\mathrm{C}$ ..... $+50$
Towel Bar, 20 inches long, 89+-C ..... 1.75
Towel Basket, 889-C ..... 11.00
Coat Hook, 93:3-C. .....  0
Toilet Paper Holder, 94i-C ..... 40
Soap and Sponge Holder, 871-C. ..... 3.20
Total Approximate Cost ..... \$27.3.95


In Orders and Specifications give Plate Numbers.

## Our Showrooms

We have just completed, at great expense, commodious showrooms, which the plumbing trade and its patrons, and the architects are cordially invited to freely use when seeking the latest and best to be secured in sanitary plumbing equipment.

In these rooms we endeavor to display fixtures set up complete in every detail, and those that require practical demonstrations, such as closets, showers, etc., are connected with city water supply.

Besides showing separate complete fixtures we have arranged entire bathrooms, from the most elaborate to those of moderate cost, in which are displayed every possible requirement in their connection for a modern, well appointed home.

## SECTION 1.

WATER CLOSETS.
WATER CLOSET BOWLS.
WATER CLOSET SEATS AND TANKS.
WATER CLOSET SUNDRIES, ETC.


Holbrook, Merrill \& Stetson, INCORPORATED.

## WATER CLOSETS.

In all of our Closet Combinations, except one or two which are classed as competition goods, the bowls are made of vitreous china. They are the best that can be had and are equal to Mott's "Vitro-Adamant," Clow's "Adamantose" and Wolff's " Duroware."

Being built on scientific lines, their operation is perfect.
The tanks in our high tank Closet Combinations are fitted with practically noiseless ball cocks of a very high grade. Suitable for High or Low Pressure.

The tanks in our low tank Closet Combinations are fitted with the high pattern cocks suitable for any pressure.

In ordering goods from this section by telegraph, it is only necessary to use the code word over or opposite the name, number or size of the article wanted, preceded by words from telegraphic code in front of this book.

Example: Crosistas one Packhoe.
Translation: Ship by railroad immediately one Boston Siphon Jet Closet Combination.

## THE KENNEY FLUSHOMETER.

## The most Practical, Economical and Silent Method of Flushing Water Closets.

A Sanitary Device which is a great advance over any system yet offered.
A perfectly satisfactory and reliable flushing arrangement can only be secured by having a solid column of water directly at the Bowl. This arrangement overcomes, entirely the imperfections which attend the use of a disconnected stream of water released from an overhead tank as in the case of numerous types of closet apparatus now in use.

The Flushometer is designed for use on either direct pressure or tank systems; working with ease and efficiency under any pressure, giving a rapid flush of large volume at the start and finishing with a slow after-flush of small volume for refilling the bowl.

In this system the overhead flush tank may be entirely dispensed with, and as these tanks are a necessary feature of nearly all closets now on the market, it is highly suitable for dwellings or other buildings in which there are closets on each floor, while a single supply tank is located in the attic or on the roof, each closet being connected to the main pipe by a branch connection.

To all intents and purposes, the Flushometer is a well-constructed water meter and so sensitive that by easy adjustment it can be made to measure the supply to the bowl and yield the same quantity at every operation.

This feature makes it possible to calculate accurately the volume of water according to requirements and to increase or diminish same as desired. The valve is made without springs or cup leathers, closes by gravity against the pressure and works perfectly either under low or high pressure, even up to three hundred pounds.

The Flushometer system is the only one that will operate under every condition. No matter how many closets are being used at the same time, it will positively give to each any number of thorough flushes.

Where it is used the cost of installation and maintenance is reduced, and the sanitary conditions are greatly improved, as it permits the construction of Lavatories of the airiest, lightest and most healthful description.

It is noiseless, doing away with the disagreeable rushing and hissing of water, and, if desired, can be made to open and close automatically.

It permits building of windows in space that would otherwise be occupied by flush tanks, and enables the architect to arrange his plans more conveniently than any other system, as the closets can be placed anywhere, under stairways, etc.

No pipes need be shown, there is no pull and chain and no ball-cock to get out of order.
The Closets will work under any pressure, they are ornamental in design, and the system is the most durable one now made.

## HOW TO INSTALL THE FLUSHOMETER.

For Direct Pressure.

The Flushometer No. 12 can be connected direct to the water supply without the use of any tank, column or chamber. In such cases the size of the water supply pipe from the building line to the Flushometer should be from $1 / 1 / 4$ to $11 / 2$ inches, according to distance and pressure. The service pipe from the street main to the building line should be not less than 1 inch , and if the pressure is less. than 25 pounds, should be $1 \frac{1}{2}$ inches. The pressure at the highest Flushometer must be at least 10 pounds. If the service pipe is $11 / 2$ inches there should be two taps $5 / 8$-inch each on the street main.

Four closets can be operated on a service such as above described. Where a greater number of closets are to be installed the size of the supply pipe should be increased. See 28 - , page 21.

## For Tank Pressure.

Place tank where convenient, but about six feet above the highest closet, and run pipe down to the various floors where the closets are to be located. A $11 / 2$-inch pipe is sufficient for from one to four closets. If there are more closets, run a 2 -inch pipe down about 10 feet from the tank and $11 / 2$-inch pipe for the remainder. In all cases take out branches for the valve chamber, as specified on page 6.

If the building is quite high, say 10 stories or over, the two lower floors may be reduced to 1 -inch.
Where the tank is less than 12 feet above the closet, use the Low Pressure Flushometer, $11 / 2$-inch inlet.

Where the tank is from 12 to 20 feet above the closet, use the High Pressure Flushometer, $11 / 4$ inch inlet.

Tank Capacity:-Where possible, the tank should have a capacity of six gallons to the closet. In large installations rigid adherence to this rule is not necessary, as six gallons to the closet provides for two flushes, one immediately following the other, of each and every closet. As it is highly improbable that all closets would be used simultaneously, the rule can be modified to suit each individual case and probable call on the service.

Adjust the regulating ring to suit pressure.

## METHOD OF ADJUSTMENT.

See cuts, page 7.
 to the top of Valse Cylinder "C."

On releasing the Handle, the Piston and Relief Valve gradually settle of their own weight to the Valve Seat.

While settling the Piston "O," fitting closely to the Cylinder "C," creates a vacuum in the upper part of Cylinder and remains suspended until air is admitted through regulating screw " $P$ "."

To regulate the quantity of air admitted and so shorten or lengthen the time of flush, the Kegulating Screw "p" is unscrewed or screwed up).

The volume of water entering at ports is controlled by the Regulating Ring " F ," which is timed to open or close the ports as required by the varying heads of water.

## METHOD OF OPERATION.

P'ul the Handle gently upward for one second, let go, and it will close of its own accord, slowly, against a high or low pressure.

The Flushometer should take from six to nine seconds to flush properly, as may be desired.
There are only two leather washers, one on the seat of the relief walve and the other on the seat of the main valve, which valse can be unscrewed and new washers put on when necessary. To do this, first unscrew the Cap, then the Valve Cylinder, then the Relief Valve, which can be done without discomnecting any piping.

As the Flushometer hats no springs or cup-leathers, works antomatically by gravity and is cushioned by the action of the water, the chance for wear or getting out of order is practically eliminated.

Be careful and see that white or red lead, used in making joints, does not get into the cylinder of the Flushometer. If this should occur, clean the inside of the Valve Cylinder, also Main Valve to prevent adhesion or obstruction.

## FLUSHOMETERS.

Following are styles of Flushometer valves made to meet various conditions as to pressure, etc.

Where the Mos. 11 and $\mathbf{1 0}$ valves are used in connection with a Gate or Angle Valve, they are provided with male threads. If used without these extra valves, they have female threads.

No. 11-Low pressure. For use where pressure is under 6 pounds, or where tank is from 6 to 12 feet above closet. Inlet $11 / 2$ inches.

No. 12-High pressure. For use where pressure is 6 to 15 pounds, or where tank is from 12 to 30 feet above the closet. Inlet $1 \frac{1}{4}$ inches.

No. $121 / 2$-High pressure. For use where pressure is from 15 to 20 pounds or more, or where tank is from 30 to 100 feet or more above the closet. Inlet 1 inch.

Yo.14-Low pressure. For marine and salt water use. Inlet $11 / 2$ inches.

No. $\mathbf{4}^{1 / 2}$-High pressure. For marine and salt water use. Inlet $11 / 2$ inches.

Yo. --Low pressure. This Flushometer combination is used only in connection with an overhead tank. The overflow is concealed in the flush pipe and discharges through the closet.

No. 16-Low pressure. For use on urinals. Is smaller than the Flushometer used for water closet service. Inlet 1 inch.

No. $161 / 2$-High pressure. For use on urinals. Inlet $3 / 4$ inch.

No. 17-Low pressure. For use where it is desirable to conceal Flushometer, as shown on pages 13,14 and 15 . Inlet $11 / 2$ inches.

No. $171 / 2$ —High pressure. For same use as No. 17. Inlet $11 / \nmid$ inches.
No. 18-Low pressure. For use in asylums, public institutions, as shown on page 15 . Inlet $11 / 2$ inches.

No. $181 / 2$-High pressure. For same use as No. 18. Inlet $11 / 4$ inches.


1-C.

The above cuts show working parts of the Flushometer Valve.
A-Rubber Bumper.
B-Cap.
C-Valve Cylinder.
D-Fibre Washer.
E-Inlet Tee.
F-Regulating Ring.
G-Controller Nut.

H-Valve Body.
I-Slip Tail Piece.
J-Link.
K-Relief Valve Stem.
L-Controller.
M-Main Valve Washer.
N -Relief Valve.

O-Main Valve Piston.
P-Regulating Screw.
Q-Cap of Handle Bar.
R-Handle Bar Nut.
S-Stuffing Box.
T-Handle Bar or Lever. U-Porcelain Tip.

The pressure of water at height of 25 feet is 10.82 pounds per square inch.

Price on Parts of Flushometers.

| Code. Name. | Each. | Code. Name. | Each. |
| :---: | :---: | :---: | :---: |
| Pabello ...........Rubber Bumper | \$0.30 | Pacatian.......... Controller | \$0.10 |
| Pabillor...........Cap. | 3.80 | Pacative.......... Main Valve Washer |  |
| Pabillum .........Valve Cylinder | 3.00 | Pacato.............Relief Valve | 1.00 |
| Pabilone...........Fibre IVasher |  | Pacaviss.......... Main Valve Piston. | 2.00 |
| Pabonibo .........Inlet Tee. | 3.00 | Pacchian.........Regulating Screw | . 10 |
| Pabulari..........Regulating Ring | . 50 | Pacciott............Cap of Handle Bar.. |  |
| Pabulose.........Controller Nut | . 10 | Paccius............Handle Bar Nut.. |  |
| Pacageon.........Valve Body. | 6.00 | Pacedera. .... . Stuffing Box. | . 60 |
| Pacandor.........Slip Tail Piece | 1.30 | Pacense...........Handle Bar or Lever | 2.00 |
| Pacanier..........Link | 80 | Paceremin....... Porcelain Tip. | 30 |

## FLUSHOMETER GATE VALVE.

BRASS, NICKEL-PLATED.

Both ends standard iron pipe thread.

| Code. |  | Pachadill | Pachalik | Pachaman |
| :---: | :---: | :---: | :---: | :---: |
| Inches |  | 1 | 11/4 | $11 / 2$ |
| Measure, face to face, inches |  | $25 / 16$ | $21 / 2$ | $21 / 2$ |
| Each. |  | \$3.00 | 3.50 | 4.50 |
| Weight, each, lbs. |  | $11 / 2$ | $21 / 2$ | $31 / 2$ |

These valves are finished with nickel-plated cap to screw on end of spindle in place of handle.

End of spindle has square shank with threaded corners, and valve can be easily opened with a pair of pliers after removing cap.

## †FLUSHOMETERANGLE VALVE.

```
BRASS, NICKEL-PLATED.
```

Union valve with standard iron pipe threads. Union nipple has male thread.


These valves are finished with nickel-plated cap to screw on end of spindle in place of handle.

End of spindle has square shank with threaded corners, and valve can

t-C. be easily opened with a pair of pliers after removing cap.
+Carried in San Francisco only.

## "ROSALIA" SIPHON JET CLOSET.

## WITH KENNEY'S PATENT FLUSHOMETER.


j- $\mathbf{C}$.
"Rosalia" Embossed Siphon Jet Vitreous China Bowl, with Nickel-Plated Brass Flushometer; $11 / 2$-inch Quartered Oak Seat and Cover, cabinet finish, with Special Nickel-Plated Offset Hinge; Brass Floor Flange, and Nickel-Plated Screws and Washers. Marble Floor Slabs extra.

No. 11 Flushometer, for pressures under 6 pounds, or where tank is from 6 to 12 feet above closet. No. 12 Flushometer, for pressures 6 to 15 pounds, or where tank is from 12 to 30 feet above closet. No. $121 / 2$ Flushometer, for pressures 15 to 50 pounds, or where tank is from 30 to 100 feet above closet.


If with Nickel-Plated Brass Gate Valve, add $\$ 4.50$.

## Roughing-in Measurements :

Distance from face of finished wall to center of outlet for back connection, $131 / 2$ inches; for side connection, 12 inches; distance from floor to center of Flushometer inlet, 25 inches.
If Gate Valve is used with back connection, add $21 / 2$ inches.
For either tank or direct supply. For use in batteries or single installations. Supply should be $11 / 2$ inches for No. 11, $11 / 4$ inches for No. 12, and 1 inch for No. $121 / 2$ Flushometer.

## "LATONA" SIPHON JET CLOSET.

## WITH KENNEY'S PATENT FLUSHOMETER.



7-C.
"Latona" Plain Siphon Jet Vitreous China Bowl, with Nickel-Plated Brass Flushometer; $11 / 2$-inch Quartered Oak Seat and Cover, cabinet finish, with Special Nickel-Plated Offset Hinge; Brass Floor Flange, Nickel-Plated Screws and Washers. Marble Floor Slabs extra.
No. 11 Flushometer, for pressures under 6 pounds, or where tank is from 6 to 12 feet above closet. No. 12 Flushometer, for pressures 6 to 15 pounds, or where tank is from 12 to 30 feet above closet. No. $121 / 2$ Flushometer, for pressures 15 to 50 pounds, or where tank is from 30 to 100 feet above closet.

| Code <br> Style | Pachorra <br> .-C No. 11 Flushometer | Pachten <br> 7-C No. 12 Flushometer | Pachtut <br> 7-C No. $121 / 2$ Flushometer |
| :---: | :---: | :---: | :---: |
| Price as described. | \$38.00 | 38.00 | 38.00 |
| Shipping weight, lbs.................... Shipping measurement, cubic feet... | 78 $51 / 2$ | 78 | $\begin{gathered} 78 \\ 51 / 2 \end{gathered}$ |

If with Nickel-Plated Brass Gate Valve, add $\$+.50$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet for back connection, $131 / 2$ inches; for side comnection, 12 inches; distance from floor to center of Flushometer inlet, 25 inches.
If Gate Valve is used with back connection, add $21 / 2$ inches.
For either tank or direct supply. For use in batteries or single installations. Supply should be $11 / 2$ inches for No. 11, $1^{11 / 4}$ inches for No. 12, and 1 inch for No. $12^{1 / 2}$ Flushometer.

## "TIBER" WASH DOWN SIPHON CLOSET.

WITH KENNEY'S PATENT FLUSHOMETER.



9-C.
Plain Wash Down Vitreous China Bowl, with $11 / 2$-inch Nickel-Plated Adjustable Elbow, for back connection and Nickel-Plated Brass Flushometer; Nickel-Plated Brass Gate Valve; $11 / 2$-inch Quartered Oak Seat and Cover, cabinet finish, with Special Nickel-Plated Offset Hinges; Brass Floor Flange, Nickel-Plated Screws and Washers.
No. 11 Flushometer, for pressures under 6 pounds, or where tank is from 6 to 12 feet above closet. No. 12 Flushometer, for pressures 6 to 15 pounds, or where tank is from 12 to 30 feet above closet. No. $121 / 2$ Flushometer for pressures 15 to 50 pounds, or where tank is from 30 to 100 feet above closet.


If without Gate Valve, deduct $\$+.50$

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet for back connection, $15 \frac{1}{2}$ inches; for side connection, 14 inches; distance from floor to center of Flushometer inlet, 25 inches.
If Gate Valve is used with back connection as shown above, add $21 / 2$ inches.
For either tank or direct supply. For use in batteries or single installations. Supply should be $11 / 2$ inches for No. 11, 1 $1 / 4$ inches for No. 12, and 1 inch for No. $121 / 2$ Flushometer.

## "JUMBO" SIPHON JET CLOSET.

```
WITH KENNEY'S PATENT FLUSHOMETER. FOR PUBLIC BUILDINGS, ETC.
```



## 11-C.

"Jumbo" Extra Large Plain Siphon Jet Vitreous China Bowl, with Concealed Jet Arm and $31 / 2$-inch Siphon Limb, Nickel-Plated Brass Flushometer; Nickel-Plated Brass Gate Valve; $11 / 2$-inch Quartered Oak Saddle Seat, cabinet finish, with Special Nickel-Plated Socket Hinge; Nickel-Plated Screws and Washers.
No. 11 Flushometer for pressures under 6 pounds or where tank is from 6 to 12 feet above closet. No. 12 Flushometer for pressures 6 to 15 pounds or where tank is from 12 to 30 feet above closet. No. $121 / 2$ Flushometer for pressures 15 to 50 pounds or where tank is from 30 to 100 feet above closet.


If without Gate Valve, deduct $\$+.50$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, for back connection, $131 / 2$ inches; for side connection, 12 inches; distance from floor to center of Flushometer inlet, 25 inches.
If Gate Valve is used with back connection, as shown above, add $21 / 2$ inches.
For either tank or direct supply. For use in batteries or single installations. Supply should be $1 / 1 / 2$ inches for No. 11, $1^{1 / 4}$ inches for No. 12, and 1 inch for No. $121 / 2$ Flushometer.

## "ROSALIA" SIPHON JET CLOSET.

WITH KENNEY'S PATENT FLUSHOMETER CONCEALED. FOR HOSPITALS, ASYLUMS, BARRACKS,



13-1.
"Rosalia" Embossed Siphon Jet Vitreous China Bowl with $11 / 2-1$ nch Nickel-Plated Brass Adjustable Elbow, Nickel-Plated Brass Flushometer; $11 / 2$-inch Quartered Oak Seat and Cover, cabinet finish, with Special Nickel-Plated Offset Hinges; Brass Floor Flange and Nickel-Plated Screws and Washers. Marble Floor Slabs extra.
No. 17 Flushometer for pressures under 10 pounds or where tank is from 2 to 20 feet above closet.
No. $171 / 2$ Flushometer for pressures over 10 pounds or where tank is more than 20 feet above closet.

| Cod | Pachthofe | Pachtkorn |
| :---: | :---: | :---: |
| Style | 13-C No. 17 Flushometer | 13-C No. 171/2 Flushometer |
| Price as described | \$46.50 | 46.50 |
| Shipping weight, lbs. | 80 | 80 |
| Shipping measurement, cubic feet | $51 / 2$ | $51 / 2$ |
| If with "Latona" bowl, deduct $\$ 1.00$ If with "Tiber" bowl, same price as "Rosalia." If with "Jumbo" bowl, add $\$ \ldots . .$. |  |  |

For roughing-in measurements and method of installing see page 14 . See also sectional cuts, page 20 . For either tank or direct supply. For use in batteries or single installations. Supply should be $11 / 2$ inches for No. 17 and $11 / 4$ inches for No. $171 / 2$ Flushometer.

## "ROSALIA" SIPHON JET CLOSET.

WITH KENNEY'S PATENT FLUSHOMETER CONCEALED.


## 15-C.

Section showing method of installation used in cut 13-C.
See also sectional cuts 25-c, 26-C and 27-C.
Roughing-in measurements for Siphon Jet and Wash Down Bowls installed as shown in cut 15-(':
"Rosalia"-Distance from face of finished wall to center of outlet, $91 / 2$ inches.
"Latona"-Distance from face of finished wall to center of outlet, $91 / 2$ inches.
"Tiber"-Distance from face of finished wall to center of outlet, $11 \frac{1}{2}$ inches.
"Jumbo"-Distance from face of finished wall to center of outlet, $91 / 2$ inches.
Distance from floor to center of Flushometer inlet, $181 / 2$ inches for all of above, when installed as shown in cut 15.C.

## "TUMA" WATER CLOSET.

WITH KENNEY'S PATENT FLUSHOMETER. FOR ASYLUMS, HOSPITALS, PRISONS, ETC



## 17-C.

"Iuma" Plain Large Area Vitreous Hopper and Trap Combined, solid porcelain seated with Nickel-Plated Brass Flushometer; Brass Flange, for back outlet, and Nickel-Plated Bolts. Can be used with wooden seat if preferred. Marble Floor Slabs extra.

No. 18 Flushometer for pressures under 10 pounds or where tank is from 2 to 20 feet above closet. No. $181 / 2$ Flushometer for pressures over 10 pounds or where tank is more than 20 feet above closet.


For 4 -inch Brass Outlet Connection, 7 inches long, add $\$ 7.00$.

## Roughing-in Measurements:

Distance from floor to center of Flushometer inlet, $14^{1 / 2}$ inches.
Distance from floor to center of Bowl outlet, $7 \mathrm{I} / 2$ inches.
For either tank or direct supply. For use in batteries or single installations. Supply should be $11 / 2$ inches for No. 18 and $11 / 4$ inches for No. $181 / 2$ Flushometer. Any number of closets can be attached to one tank.

## "SONOMA" WATER CLOSET.

WITH KENNEY'S PATENT FLUSHOMETER. FOR PUBLIC INSTITUTIONS, ETC.


19.C.
"Sonoma" Plain Large Area Vitreous China Hopper and Trap Combined, with solid porcelain seat, Nickel-Plated Brass Flushometer; Brass Floor Flange and Nickel-Plated Screws. Marble Floor Slabs extra.

No. 11 Flushometer for pressures under 6 pounds, or where tank is from 6 to 12 feet above closet. No. 12 Flushometer for pressures 6 to 15 pounds, or where tank is from 12 to 30 feet above closet. No. $121 / 2$ Flushometer for pressures 15 to 50 pounds, or where tank is from 30 to 100 feet above closet.

| Code. Style. | Pachucha <br> 19.(' No. 11 Flushometer | Pachylope <br> 19.- No. 12 Flushometer | Pachynol 19.C No. $121 / 2$ Flushometer |
| :---: | :---: | :---: | :---: |
| Price as described.. | \$35.00 | 35.00 | 35.00 |
| Shipping weight, lbs.. | 82 | 82 | 82 |

For Nickel-Plated Brass Gate Valve, add $\$ 4.50$.
Wooden seats may be used if preferred.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, for back connection 17 inches; for side connection, $15 \frac{1}{2}$ inches. If Gate Valve is used with back connection, add $21 / 2$ inches.
Distance from floor to center of Flushometer inlet, 25 inches.
Any number of closets can be attached to one tank. Only one tank in a building.
For either tank or direct supply. For use in batteries or single installations. Supply should be $1 \frac{1}{2}$ inches for No. 11, $1^{1 / 4}$ inches for No. 12, and 1 inch for No. $121 / 2$ Flushometer.

## "ROSALIA" SIPHON JET CLOSET.

```
WITH KENNEY'S PATENT FLUSHOMETER.
```


21.C.

## Single Tank Combination.

Embossed Siphon Jet Vitreous China Bowl with Nickel-Plated Brass Flushometer; $11 / 2$-inch Quartered Oak Seat and Cover, cabinet finish, with Special Nickel-Plated Offset Hinges; Quartered Oak Round Cornered Tank, 23x11x10 inches; 2-inch Nickel-Plated Flush Pipe; Brass Floor Flange, and Nickel-Plated Screws and Washers.

Marble Floor Slabs extra.

Code. $\qquad$ Pachyma
Style. $\qquad$ 21-C No. 5 Flushometer
Price as described $\qquad$ $\$ 64.00$
Shipping weight, lbs............

## 140

Shipping measurement, cu.ft.
9
If with "Latona" Bowl, deduct $\$ 1.00$.
No. 5 Flushometer is used only in connection with our overhead tank.

The orerflow is concealed in flush pipe and discharges through the closet.

The water supply to this tank does not differ from the usual tank method.

Roughing-in Measurement:
Distance from face of finished wall to center of outlet, 15 inches.

## SUGGESTIONS FOR ARCHITECTS.

SPECIFYING KENNEY'S PATENT FLUSHOMETER.

Size Pipe.

## TANK PRESSURE.

A one and a half-inch pipe from the Tank to the Closets is sufficient for from one to four closets.
If there are more than four closets, run a 2 -inch pipe down to the first lateral, reducing at that point to $11 / 2$-inch for the remainder.

In large installations run a $21 / 2$-inch pipe to first lateral, then reduce to 2 -inch, and $1 \frac{1}{2}$-inch for the remainder.

If the building is quite high, say ten stories or over, the two lower floors may be reduced to 1 inch.

The size of lateral pipe varies from $11 / 2$-inch to $21 / 2$-inch, according to the number of closets in battery on each floor and distance from tank.

In all cases take out $11 / 2$ and $11 / 4$-inch branches from the laterals, according to size of valve inlet.

LOW AND HIGH PRESSURE.
Where the tank is less than 12 feet above the closet, use No. 11 Low Pressure Flushometer.
Where the tank is from 12 to 30 feet above the closet, use No. 12 High Pressure Flushometer.
Where the tank is over 30 feet above the closet, use No. $121 / 2$ High Pressure Flushometer.
If Flushometer closes too slowly, release the regulating screw by unscrewing; if too rapidly, screw it down a little.

## TANK CAPACITY.

Where possible the tank should have a capacity of six gallons to the closet. In large installations rigid adherence to this rule is not necessary, as six gallons to the closet provides for two flushes, one immediately following the other of each and every closet. As it is highly improbable that all closets will be used simultaneously, the rule can be modified to suit each individual case.

Specifications should read: "Plate No.——, Holbrook, Merrill \& Stetson's Catalogue, No. $1 / 5 . "$

## SECTIONAL DRAWINGS OF CLOSETS.

## WITH KENNEY'S PATENT FLUSHOMETER ATTACHED.



Showing methods of connecting closets illustrating "roughing-in measurements," as given elsewhere in this catalogue.

## SECTIONAL VIEW OF PLATES 9-C AND I0-C.

SHOWING METHOD OF INSTALLATION.
See pages 13 and 14.


Wall nipple shown in cut $\mathbf{2 7 - C}$.
In ordering give exact length desired, as shown by dotted lines.


26-C.
Handle Bar shown in cut $\mathbf{2 7 - C}$. In ordering give length desired, as shown by dotted lines


## CONNECTION DIRECT TO STREET MAIN.



The Flushometer No. 12 can be connected to the water supply without the use of a tank as follows:

The water supply should be $11 / 2$ inches in diameter from the building line to the Flushometers, The service pipe from the street main to the building line should under no circumstances be less than 1 inch, and if the pressure is less than 25 to 30 pounds it should be $1 \frac{1 / 2}{}$ inches.

The street main tap must not be less than $3 / 4$ inch or its equivalent.
The pressure at the closet highest above the street main must not be less than 10 pounds.
Four closets can be operated on a service such as described above. Where a greater number of closets are to be installed the size of the supply pipe should be increased proportionately.

## SECTION OF OFFICE BUILDING.

## SHOWING USE OF KENNEY'S PATENT FLUSHOMETER



29-(.

This section illustrates a number of batteries of closets arranged on different floors, together with urinals, showing a method of installation frequently used, all being supplied from one tank.

IVindows can be inserted as shown in the first and top floors, or in any other desired manner.
Any number of closets or urinals, can be arranged in the batteries.
Laterals can be carried to any point in the building.

## SECTION OF RESIDENCE.

## SHOWING USE OF KENNEY'S PATENT FLUSHOMETER.



30-C.

This section shows a method of installation using one tank only for the building. Any style of closet, with Flushometer, shown in this catalogue can be used, and the relative positions can be altered to suit the requirements.

The above is intended as a suggestion for architects and builders.
Laterals can be carried to any desired point.
Any number of closets can be attached to tank.

## SECTIONAL VIEW OF MARINE INSTALLATION

```
OF KENNEY'S PATENT FLUSHOMETERS.
```



The above section shows one of numerous methods used for the application of this system to marine use.

This section shows the method adopted by the U. S. Government on the army transports.
Laterals can be carried to any point. Any number of closets can be attached or arranged in batteries in different parts of the vessels.

## SECTIONAL VIEW OF MARINE INSTALLATION

## FOR YACHTS.



32-C.

This section shows another method employed in the application of the Kenney Flushometer System to marine use.

The supply is obtained from a pump pressure through a $11 / 2$-inch pipe carried to a water tank, which is vented in order to prevent its becoming water-bound. From this tank a 2-inch vertical pipe is carried down to a point just below the decks and is there branched into $11 / 2$-inch for each water closet.

The waste from the water closet is connected with that of the baths and sinks and carried through a check valve into a soil tank in the hold of the vessel. This tank is $2 \times 3 \times 6$ feet in size and has a capacity of over 200 gallons.

The vents are carried by a 4 -inch pipe and ventilate through the smoke stack of the ressel, which consumes all gases and odors.

The check valve at the point where the waste pipes connect with the soil tank serves as an effectual barrier against back pressure and the entrance of waste water from the soil tank due to the rolling of the yacht.

From the steam pump a $11 / 2$-inch steam pipe is carried to a balance valve, which is operated by a float in the soil tank.

As the tank fills the balance valve is opened, starting an action which draws all of the contents of the soil tank to an ejector having a 4 -inch inlet and outlet, which discharges through a sea valve just below the water line of the yacht.

The bottom of the tank is graded to the 4 -inch outlet so as to insure complete action.
As an additional protection in case of accident to the float in the soil tank or to the balance valve, a double by-pass can be placed between the balance valve and the ejector. This can be connecte with both the steam and the water pipes and used in all cases when the balance valve or float for any reason does not operate.

By use of the Kenney Ejector a 200 -gallon tank can be emptied in fifteen seconds, using less than five pounds of steam. A pump, if desired, can be used equally as well.

## ""RAMONA" SIPHON JET CLOSET.

PIANO FINISHED WOODWORK.

33.1 .

Large, Square Back " Ramona" Siphon Jet Vitreous China Bowl; Quartered Oak Solid Bent, Moulded Zinc Lined Tank, $101 / 2 \times 22 \times 11$ inches, 11 gallons capacity, with $11 / 2$-inch Special Flush Valve, Union Ball Cock and Special Ramona Tank Board; 11/2-inch Quartered Oak Ramona Saddle Seat and Cover, with Nickel-Plated Brass Hinges; $11 / 2$-inch Nickel-Plated Flush Pipe, with Nickel-Plated Slip Joint Connection and Nickel-Plated Flush Pipe Post and Bumper; Nickel-Plated Slip Joint Angle Supply Complete, ( $1 / 2$-inch I. P. size), Brass Floor Flange and Nickel-Plated Floor Screws and Washers.

For price, weights and measurements, see page 27.
+Carried in San Francisco only.

## $\dagger$ "RAMONA" SIPHON JET CLOSET.

Shown on Page 26.


For Copper Lined Tank, add $\$ 1.25$.
For Nickel-Plated Supply Pipe to floor, with Nickel-Plated Post, add $\$ 0.15$.
For Nickel-Plated Stop V'alve for supply to floor, add $\$ 0.90$.
If without Brass Floor Flange, deduct $\$ 0.25$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $121 / \nmid$ inches; from center of flush connection to center of bottom supply comection on tank, 6 inches; from center of tank supply to wall, 4 inches; from center of supply inlet in wall to bottom of tank, 9 inches.

Diagram and Measurements of "Ramona" Closet Bowl:


## Shipping Weights and Measurements of "Ramona" Closet :



## "NEW GEM" SIPHON JET CLOSET.



36-C.
"New Gem" Embossed Siphon Pinnacle Jet, Vitreous China Bowl; Quartered Oak, Solid Bent, Moulded Zinc Lined Gem Tank, $10 \times 20 \times 11$ inches, $91 / 2$ gallons capacity, with $11 / 2$-inch Special Flush Valve, Union Ball Cock and "Gem" Tank Board; $11 / 2$-inch "Gem" Quartered Oak Saddle Seat and Cover with Heavy Nickel-Plated Brass Hinges; $11 / 2$-inch Nickel-Plated Flush Pipe with Nickel-Plated Slip Joint Connection and Nickel-Plated Post and Bumper; Nickel-Plated Slip Joint Angle Supply Complete, ( $1 / 2-$ inch I. P. size), Brass Floor Flange and Nickel-Plated Screws and Washers.

See page 29 for price, weights and measurements.

## "NEW GEM" SIPHON JET CLOSET.

Shown on Page 28.


Marble Floor Slab extra.

$$
\text { For Copper Lined Tank, add } \$ 1.25 \text {. }
$$

For Nickel-Plated Supply to floor with Nickel-Plated Post, add $\$ 0.10$.
For Nickel-Plated Slip Joint Stop Valve for supply to floor $1 / 2-\mathrm{in}$. Iron Pipe size, add $\$ 0.90$.
If without Brass Floor Flange, deduct $\$ 0.25$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $113 / 4$ inches; from center of flush connection to center of bottom supply connection on tank, 6 inches; from center of tank supply to wall. 4 inches; from center of supply inlet in wall to bottom of tank, 9 inches.


This bowl has double jet pipe, making it a very strong, positive and quick-working bowl. Has a center outlet from bowl, and has the largest water area of any siphon jet bowl on the market, the water surface measuring $11 \times 13$ inches. The usual objectionable noise in the flushing of closet bowls is overcome in the "New Gem" Bowl.

Made with $11 / 2$-inch top inlet coupling and seat attachment.

## Shipping Weights and Measurements of "New Gem" Closet:

|  | Package | Pounds | Cubic Feet |
| :---: | :---: | :---: | :---: |
| Bowl | 1 Crate | 60 | 4 |
| Tank | 1 Case | 47 | $31 / 2$ |
| Tank Board. | 1 Case | 20 | 2 |
| Seat.. | 1 Case | 20 | 1 |
| Flush Pipe.. | 1 Case | 10 | 1 |
| Supply and other trimmings | 1 Case | 4 | 1/4 |
|  |  | 161 | 113/4 |

"BOSTON" SIPHON JET CLOSET.

41.C.
"Boston" Plain Siphon Jet Vitreous China Bowl; Round Cornered Oak Zinc Lined Tank, $9 \times 20 \times 10$ inches, $71 / 2$ gallons capacity, with $11 / 2$-inch Gooseneck Siphon, Noiseless Ball Cock and Oak Tank Board; $11 / 4$-inch Oak Seat and Cover, with Nickel-Plated Hinges; $11 / 2$-inch Nickel-Plated Flush Pipe, with Nickel-Plated Slip Joint Connection, Nickel-Plated Flush Pipe Post and Seat Bumper; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Screws and Washers.

See page 31 for price, weights and measurements.

## "BOSTON" PLAIN SIPHON JET CLOSET.

Shown on Page 30.
Code ..... Packhoef ..... 41-CPlate.
Price as described on page 30 ..... $\$ 28.00$

For Copper Lined Tank, add $\$ 0.60$. For Nickel-Plated Supply to floor with Nickel-Plated Post, add $\$ 0.75$. For Nickel-Plated Stop Valve for Supply to floor, add $\$ 0.90$.

For Brass Floor Flange, add $\$ 0.25$. If without Nickel-Plated Angle Supply, deduct $\$ 0.80$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $113 / 4$ inches; from center of flush connection to center of bottom supply connection on tank, $61 / 2$ inches; from center of tank supply to wall, 4 inches; from center of supply inlet in wall to bottom of tank, 9 inches.

## Sectional Drawing and Measurements of "Boston" Closet Bowl:


t2-C.


43 -


44-(.

This Bowl has double jet pipe, making it a very strong, positive and quick-working closet. Has a center outlet from bowl, and has the largest water area of any siphon jet closet on the market, the water surface measuring 11x13 inches.

Made with $1 \frac{1}{2}$-inch inlet coupling and seat attachment.

## Shipping Weights and Measurements of "Boston" Closet:

|  | Package | Pounds | Cubic Feet |
| :---: | :---: | :---: | :---: |
| Bowl. | 1 Crate | 63 | $41 / 2$ |
| Tank. | 1 Case | 41 | $23 / 4$ |
| Tank Board. | 1 Case | 10 | 1 |
| Seat.. | 1 Case | 11 | 1 |
| Flush Pipe. | 1 Case | 10 | 1 |
| Supply and other trimmings.. | 1 Case | 4 | 1/4 |
|  |  | 139 | $101 / 2$ |

## "ALFA" WASH DOWN SIPHON CLOSET.


46.1 .

[^0]
## "ALFA" EMBOSSED WASH DOWN SIPHON CLOSET.

Shown on Page 32.

For Copper Lined Tank, add $\$ 0.60$.
For Nickel-Plated Supply to floor with Nickel-Plated Strap, add $\$ 0.55$.
For Nickel-Plated Stop Valve for supply to floor, add $\$ 0.90$.
For Brass Floor Flange, add $\$ 0.25$.
If without Nickel-Plated Angle Supply, deduct $\$ 0.80$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 13 inches; from center of flush connection to center of bottom supply connection on tank, $61 / 2$ inches; from center of tank supply to wall, 4 inches; from center of supply inlet in wall to bottom of tank, 9 inches.

Sectional Drawing and Measurements of "Alfa" Closet Bowl:


47-(.


48-C.

$49 . \mathrm{C}$.

We consider this the best Wash Down Siphon Bowl on the market. It has a jet inside of bowl at back runuing down to the water line; the full force of the water as it leaves the jet comes directly in enntact with the contents of the bowl, forcing the soil through the trap, thus insuring a perfect discharge at each operation of the closet and not depending entirely on siphonic action.

It has a full si\%e round trap throughout, $23 / 4$ inches in diameter; water seal, $33 / 4$ inches, and a surface of water measuring $71 / 2 \times 81 / 2$ inches.

Made with $1 / 1 / 4$-inch coupling and seat attachment.

Shipping Weight and Measurements of "Alfa" Closet:


## †"ALMA" PLAIN WASH DOWN SIPHON CLOSET.


"Alma" Plain Wash Down Siphon Vitreous China Bowl ; Oak, Round Cornered, Moulded, Zinc Lined Tank, $9 \times 20 \times 10$ inches, $71 / 2$ gallons capacity, with $11 / 4$-inch Gooseneck Siphon Flushing Valve, Noiseless Ball Cock and Oak Tank Board; 1 $1 / 4$-inch Oak Seat and Cover ; $1 \frac{1}{4}-$-inch NickelPlated Flush Pipe with Nickel-Plated Adjustable Elbow and Nickel-Plated Flush Pipe Strap ; NickelPlated Supply to floor with Nickel-Plated Stop Valve and Flange (1/2-inch I. P. size); NickelPlated Floor Screws and Washers.

See page 35 for price, weights and measurements.
$\dagger$ Carried in San Francisco only.

## †"ALMA" PLAIN WASH DOWN SIPHON CLOSET.

Shown on Page 34.


> For Copper Lined Tank, add $\$ 0.60$. If with Nickel-Plated Angle Supply, deduct $\$ 1.55$.
> For Seat without Cover, deduct $\$ 0.35$.
> For Brass Floor Flange, add $\$ 0.25$. If without Supply to Floor with Strap and Valve, deduct $\$ 2.35$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 13 inches; from center of flush connection to center of supply connection on tank, $61 / 2$ inches; from center of tank supply to wall, 4 inches.

## Sectional Drawing and Measurements of "Alma" Closet Bowl:



52-C.


53-C.


54-C.

We consider this the best Wash Down Siphon Bowl on the market. It has jet inside of bowl at back running down to the water line. The full force of the water as it leaves the jet comes directly in contact with the contents of the bowl, forcing the soil through the trap, thus insuring a perfect discharge at each operation of the closet and not depending entirely on siphonic action.

It has a full size round trap throughout, $23 / 4$ inches in diameter; water seal, $33 / 4$ inches and surface of water measuring $71 / 2 \times 81 / 2$ inches.

Made with $11 / 4$-inch back inlet coupling and seat attachment.

## Shipping Weights and Measurements of "Alma" Closet:

|  | Package. | Pounds. | Cubic Feet. |
| :---: | :---: | :---: | :---: |
| Bowl. | 1 Crate | 50 | 4 |
| Tank. | 1 Case | 39 | 23/4 |
| Tank Board. | 1 Case | 10 | 1 |
| Seat..... | 1 Case | 11 | 1 |
| Flush Pipe. | 1 Case | 10 | 1 |
| Supply and other trimmings | 1 Case | 4 | 1/4 |
| $\dagger$ Carried in San Francisco only. |  | 124 | 10 |

## "GNU" WASH DOWN SIPHON CLOSET.



61-C.

[^1]
## "GNU" PLAIN WASH DOWN SIPHON CLOSET.

Shown on Page 36.


For Copper Lined Tank, add $\$ 0.60$.
For Nickel-Plated Slip Joint Angle Supply, add $\$ 0.80$.
For $1 / 2 \times 3 / 8$-inch Rough Nickel-Plated Angle Valve, add $\$ 0.60$. For Nickel-Plated Supply to floor with Nickel-Plated Strap, add $\$ 1.35$.

For Stop Valve for Supply to floor, add $\$ 0.90$.
For Brass Floor Flange, add $\$ 0.25$.
For Seat without Cover, deduct $\$ 0.35$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $93 / 4$ inches; from center of flush connection to center of supply connection on tank, $61 / 2$ inches; from center of supply connection in tank to wall, 4 inches.

## Sectional Drawings and Measurements of "Gnu" Closet Bowl:


62.C.


63-C.


64-C.

This bowl has a full size round trap throughout, $21 / 4$ inches in diameter; with seal, $33 / 4$ inches, and surface of water measuring 7 x 8 inches.

The jet inside of the bowl at back does not run down to the water line.
Made with $11 / 4$-inch inlet coupling, seat attachment, and rear outlet.

## Shipping Weights and Measurements of "Gnu" Closet:

|  | Package | Pounds | Cubic Feet |
| :---: | :---: | :---: | :---: |
| Bowl. | 1 Crate | 45 | 4 |
| Tank. | 1 Case | 25 | 2 |
| Tank Board. | 1 Case | 10 | 1 |
| Seat. | 1 Case | 11 | 1 |
| Flush Pipe. | 1 Case | 10 | 1 |
|  |  | 101 | 9 |



66-C.
"New Dome" Embossed Siphon Pinnacle Jet Vitreous China Bowl ; Bent Oak Piano Finish, Zinc Lined Tank, $19 \times 6 \times 16$ inches, $91 / 2$ gallons capacity, with 2 -inch Eastwood Flushing Valve, High Pattern Ball Cock, Nickel-Plated Push Button and Nickel-Plated Flush Connection; $11 / 2$-inch Quartered Oak Piano Finish Saddle Seat and Cover with Nickel-Plated Hinges; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Brass Floor Flange and Nickel-Plated Screws and Washers.
Code Packwag
Price as described. ..... $\$ 32.40$
Shipping weight, lbs ..... 122
Shipping measurement, cubic feet ..... $81 / 2$

For Copper Lined Tank, add $\$ 0.75$. For Marble Top Tank, add $\$ 1.75$. Straight Supply to Floor, same price as Angle Supply. If without Floor Flange, deduct $\$ 0.25$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $141 / 4$ inches; from center of flush coupling to center of supply coupling on tank, 8 inches; from bottom of tank to center of supply inlet in wall, 9 inches; from face of finished wall to center of supply coupling on tank, 3 inches.

## "RUSH" SIPHON JET LOW DOWN CLOSET.



## 70.C.

"Rush" Embossed Siphon Pinnacle Jet Vitreous China Bowl; Oak Zinc Lined Tank, 19x6x16 inches, $91 / 2$ gallons capacity, with 2-inch Eastwood Flushing Valve, High Pattern Ball Cock, NickelPlated Push Button and Nickel-Plated Flush Connection; $11 / 4$-inch Oak Seat and Cover; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Screws and Washers.
Code ..... Paclite
Price as described ..... $\$ 29.00$
Shipping weight, lbs ..... 125
Shipping measurement, cubic feet ..... $81 / 2$

For Copper Lined Tank, add $\$ 0.75$. For Marble Top Tank, add $\$ 1.75$.
Nickel-Plated Straight Supply to Floor, same price as Angle Supply.
For Brass Floor Flange, add $\$ 0.25$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $141 / 4$ inches; from center of flush connection to center of supply connection on tank, 8 inches; from center of supply connection on tank to wall, 3 inches; from bottom of tank to center of supply inlet in wall, 9 inches.

## "EDDY" SIPHON JET LOW DOWN CLOSET.



72-C.
"Eddy" Plain Siphon Pinnacle Jet Vitreous China Bowl ; Oak Hard Finish Zinc Lined Tank, $19 \times 6 \times 16$ inches, $91 / 2$ gallons capacity, with 2 -inch Eastwood Flushing Valve, High Pattern Ball Cock, Nickel-Plated Push Button and Nickel-Plated Flush Connection; $1 \frac{1}{4}$-inch Oak Hard Finished Seat and Cover; Nickel-Plated Supply to Floor ( $3 / 8-\mathrm{in}$. I. P. size) ; Nickel-Plated Screws and Washers.
Code. Paclome
Price, as described ..... $\$ 28.00$
Shipping weight, lbs ..... 125
Shipping measurement, cubic feet. ..... $81 / 2$

For Copper Lined Tank, add $\$ 0.75$. For Marble Top Tank, add $\$ 1.75$.
For Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size), complete, add $\$ 0.35$.
For Brass Floor Flange, add $\$ 0.25$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $14 \frac{1}{4}$ inches; from center of flush connection to center of supply connection on tank, 8 inches; from center of supply connection on tank to wall, 3 inches; from bottom of tank to center of supply inlet in wall, 9 inches.

## "CHINO" WASH DOWN SIPHON LOW DOWN CLOSET.



74-C.
"Chino" Embossed Siphon Wash Down Vitreous China Bowl; Oak Zinc Lined Tank, 19x6x16 inches, $91 / 2$ gallons capacity, with 2-inch Eastwood Flushing Valve, High Pattern Ball Cock, NickelPlated Push Button and 2 -inch Nickel-Plated Adjustable Flush Connection; $1 \frac{1}{4}$-inch Oak Seat and Cover; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Floor Screws and Washers.

Marble Floor Slab extra.
Code. ..... Pacotilo
Price as described ..... $\$ 23.00$
Shipping weight, lbs ..... 125
Shipping measurements, cubic feet. ..... $81 / 2$

For Copper Lined Tank, add $\$ 0.75$. For Marble Top Tank, add $\$ 1.75$.
Nickel-Plated Straight Supply to Floor, same price as Angle Supply.
For Brass Floor Flange, add $\$ 0.25$.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 13 inches; from center of flush connection to center of supply connection on tank, 8 inches; from center of tank supply to wall, 3 inches from bottom of tank to center of supply inlet in wall, 9 inches.

## "VOLGA" WASH DOWN SIPHON LOW DOWN CLOSET.



76-C.
"Volga" Plain Wash Down Siphon Vitreous China Bowl; Oak Zinc Lined Tank, 19x6x16 inches, $91 / 2$ gallons capacity, with 2 -inch Eastwood Flushing Valve, High Pattern Ball Cock, Nickel-Plated Push Button and 2-inch Nickel-Plated Adjustable Flush Connection; 1 $1 / 4$-inch Oak Seat and Cover; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Floor Screws and Washers.

Marble Floor Slab extra.
Code Pacouris
Price as described ..... $\$ 22.50$
Shipping weight, lbs ..... 125
Shipping measurement, cubic feet ..... $81 / 2$

For Copper Lined Tank, add $\$ 0.75$.
For Marble Top Tank, add $\$ 1.75$. For Floor Flange, add $\$ 0.25$.
Nickel-Plated Supply to Floor, same price as Angle Supply. For Seat without Cover, deduct $\$ 0.35$.

## Roughing-in Measurements:

Distance from face of finiished wall to center of outlet, 13 inches; from center of flush connection to center of supply connection on tank, 8 inches; from center of supply connection to wall, 3 inches; from bottom of tank to center of supply inlet in wall, 9 inches.

## "TOGO" WASH DOWN SIPHON LOW DOWN CLOSET.


78.C.
"Togo" Plain Wash Down Siphon Vitreous China Bowl; Oak Hard Finished Zinc Lined Tank, 19x6x16 inches, $91 / 2$ gallons capacity, with 2 -inch Rubber Ball Flushing Valve, High Pattern Ball Cock, Nickel-Plated Push Button and 2-inch Nickel-Plated Adjustable Elbow Flush Connection; $11 / 4$-inch Oak Hard Finished Seat and Cover; Nickel-Plated Angle Valve ( $1 / 2 \times 3 / 8$-inch I. P. size); Nickel-Plated Screws and Washers.
Code ..... Pactador
Price as described ..... $\$ 20.50$
Shipping weight, lbs ..... 120
Shipping measurement, cubic feet ..... $81 / 2$

For Copper Lined Tank, add $\$ 0.75$. For Marble Top Tank, add $\$ 1.75$.
For Floor Flange, add $\$ 0.25$. For Seat without Cover, deduct $\$ 0.35$.
Nickel-Plated Straight Supply to Floor, same price as Angle Supply.

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 13 inches; from center of flush connection to center of supply connection on tank, 8 inches; from center of supply connection on tank to wall, 3 inches.

80.C.
"Hilo" Open Trap Embossed Regular Front Washout Bowl; Round Cornered Moulded Oak Zinc Lined Tank, 20x9x10-inches, $71 / 2$ gallons capacity, with $11 / 4$-inch Siphon, Noiseless Ball Cock and Tank Board; 1,4 -inch Oak Seat and Cover; $11 / 4$-inch Nickel-Plated Flush Pipe with NickelPlated Adjustable Elbow and Nickel-Plated Flush Pipe Strap; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Floor Screws and Washers.

Marble Floor Slabs extra.
Code
Price as described
Shipping weight, lbs
Shipping measurement, cubic feet

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 9 inches.

## "RAINIER" WASHOUT CLOSET.


$25 . C$.
"Rainier" Open Trap Plain Regular Front Washout Bowl; Beaded Oak Tank, 17x8x10 inches, $51 / 2$ gallons capacity, with $11 / 4$-inch Gooseneck Siphon, Noiseless Ball Cock and Tank Board; $11 / 4$-inch Oak Seat and Cover; $11 / 4$-inch Nickel-Plated Flush Pipe with Nickel-Plated Flush Pipe Strap and Nickel-Plated Adjustable Elbow; Nickel-Plated Angle Supply (1/2-inch I. P. size); NickelPlated Screws and Washers.
Code Pacticio
Price as described ..... $\$ 14.50$
Shipping weight, lbs ..... 90
Shipping measurement, cubic feet ..... $71 / 2$

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 9 inches.
"ALAMEDA" OFFSET CLOSET.

84.C.
"Alameda" Plain Offset Regular Front Washout Bowl; Beaded and Varnished Oak Zinc Lined Tank, $17 \times 8 \times 10$ inches, $51 / 2$ gallons capacity, with $11 / 4$-inch Gooseneck Siphon, Ball Cock and Tank Board; 11/4-inch Oak Seat and Cover; 11/4-inch Nickel-Plated Flush Pipe and Nickel-Plated Adjustable Elbow; $1 / 2 \times 3 / 8$-inch Nickel-Plated Angle Valve; Nickel-Plated Floor Screws and Washers. Marble Floor Slabs extra.


## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $11 \frac{1}{2}$ inches.
"AJAX" HOPPER CLOSET.


86-C.
"Ajax" Plain Oval Flushing Rim Porcelain Hopper; Beaded and Varnished'Oak Zinc Lined Tank, $17 \times 8 \times 10$ inches, $51 / 2$ gallons capacity, with $1 \frac{1}{4}-$-inch Gooseneck Siphon, Noiseless Ball Cock and Tank Board; 1 $1 / 4$-inch Oak Seat and Cover; $11 / 4$-inch Nickel-Plated Flush Pipe and NickelPlated Adjustable Elbow; Nickel-Plated Screws and Washers.

Code
Price as described............................................................................................... $\$ 13.60$
Shipping weight, lbs
Shipping measurement, cubic feet ..... $61 / 2$

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 10 inches.

## "‘PINAL" HOPPER CLOSET.


se-1:
"Pinal" Plain Round Flushing Rim Porcelain Hopper; Beaded and Varnished Oak Zinc Lined Tank, $17 \times 8 \times 10$ inches, $51 / 2$ gallons capacity, with $11 / 4$-inch Gooseneck Siphon, Noiseless Ball Cock and.Tank Board; $11 / 4$-inch Oak Seat and Cover; $1 / \not / 4$-inch Nickel-Plated Flush Pipe and NickelPlated Adjustable Elbow; Nickel-Plated Screws and Washers.
Code ..... Pactoler
Price as described. ..... $\$ 11.75$
Shipping weight, lbs ..... 71
Shipping measurement, cubic feet ..... $61 / 2$

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 11 inches.

## "INDUS" ENAMELED SIPHON JET CLOSET.



## 90-C.

"Indus" Porcelain Enameled, inside and outside, Siphon Jet Bowl with $11 / 2$-inch Brass Flush Inlet and Improved Roll Top Flushing Rim with Concealed Joint; Round Cornered Oak Zinc Lined Tank with $11 / 2$-inch Flushing Valve, Noiseless Ball Cock and Tank Board; $1^{11 / 4}$-inch Oak Seat and Cover with Nickel-Plated Brass Hinges; $11 / 2$-inch Nickel-Plated Brass Flush Pipe with Post and Slip Joint Connection; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Screws and Washers.

Code
Price as described.......................................................................................... $\$ 27.25$
Shipping weight, lbs.
Shipping measurement, cubic feet.


92-C.
"Oxus" Porcelain Enameled, inside and outside, Wash Down Siphon Bowl with $1 \frac{1}{4}$-inch Flush Inlet and Improved Roll Top Flushing Rim with Concealed Joint; Round Cornered Oak Zinc Lined Tank with $11 / 4$-inch Flush Valve, Noiseless Ball Cock and Tank Board; 11/4-inch Oak Seat and Cover with Nickel-Plated Brass Hinges; $1 \frac{1}{4}$-inch Nickel-Plated Flush Pipe with Nickel-Plated Strap and Nickel-Plated Adjustable Elbow; Nickel-Plated Angle Supply ( $1 / 2-\mathrm{inch}$ I. P. Size ); Nickel-Plated Screws and Washers.
Code Pactyas
Price as described. ..... $\$ 24.80$
Shipping weight, lbs ..... 147
Shipping measurement, cubic feet ..... 81/4
Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 13 inches.

## "TIGRIS" ENAMELED SIPHON JET LOW DOWN

 CLOSET.

94-C.
"Tigris" Porcelain Enameled, inside and outside, Siphon Jet Bowl and 2-inch Brass Flush Inlet and Improved Roll Top Flushing Rim with Concealed Joint; Bent Oak, Piano Finish, Zinc Lined Tank with 2-inch Eastwood Flush Valve, High Pattern Ball Cock, Nickel-Plated Push Button and Nickel-Plated Flush Connection; $11 / 4$-inch Oak Seat and Cover with Nickel-Plated Brass Offset Post Hinges; Nickel-Plated Angle Supply (1/2-inch I. P. size); Nickel-Plated Screws and Washers.

> Code.
> Pacuvian
> Price as described $\$ 29.50$

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, $133 / 4$ inches.

# "ELBE" ENAMELED WASH DOWN SIPHON LOW DOWN CLOSET. 



96-C.
"Elbe" Porcelain Enameled, inside and outside, IVash Down Siphon Bowl with 2-inch Brass Flush Inlet and Improved Roll Top Flushing Rim with Concealed Joint; Round Cornered Oak Zinc Lined Tank with 2-inch Eastwood Flushing Valve, High Pattern Ball Cock, Nickel-Plated Push Button and Nickel-Plated Elbow Flush Connection; $11 / 4-$ inch Oak Seat and Cover with NickelPlated Brass Offset Post Hinges; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Screws and Washers.
Code Paddel
Price as described. ..... $\$ 26.60$
Shipping weight, lbs ..... 160
Shipping measurement, cubic feet ..... $81 / 2$
If with Bowl Enameled inside and Painted outside, deduct $\$ 1.65$.

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 15 inches.

## "GILA" ENAMELED WASHOUT CLOSET.



98-C.
"Gila" Porcelain Enameled, inside and outside Washout Bowl with $11 / 4$-inch Brass Flush Inlet and Improved Roll Top Flushing Rim with Concealed Joint; Round Cornered Oak Zinc Lined Tank with $11 / 4$-inch Gooseneck Siphon, Noiseless Ball Cock and Oak Tank Board; $11 / 4$-inch Oak Seat and Cover with Nickel-Plated Hinges; $11 / 4$-inch Nickel-Plated Flush Pipe with Nickel-Plated Strap and Nickel-Plated Adjustable Elbow; Nickel-Plated Angle Supply ( $1 / 2$ inch I. P. size); Nickel-Plated Screws and Washers.

Code
Paddler
Price as described
Shipping weight, lbs
Shipping measurement, cubic feet

## "AUTO" ENAMELED HOPPER CLOSET.



100-C.
"Auto" Tall Oval Hopper, Porcelain Enameled Inside, Painted Outside, with Roll Top Flushing Rim; Oak Beaded and. Varnished Zinc Lined Tank with $11 / 4$-inch Gooseneck Siphon, Noiseless Ball Cock and Oak Tank Board; 1-inch Oak Seat, no Cover; $1 / 1 / 4$-inch Nickel-Plated Flush Pipe with Nickel-Plated Adjustable Elbow and Nickel-Plated Flush Pipe Strap.

Code
Paddock
Price as described.
$\$ 12.40$
Shipping weight, lbs
97
Shipping measurement, cubic feet. 71/4

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 9 inches.

## PRISON CLOSET AND LAVATORY.



101 - C .
Prison Porcelain Enameled Inside Closet, with 2-inch Outlet and Special Flanged Trap, Enameled Combined Seat and Flush Rim and Heavy Special Pattern Prison Closet Valve. Porcelain Enameled Inside Extra Heavy one piece Prison Lavatory with Self-closing Extra Heary Faucet and Waste Coupling drilled for bolting to cell wall.


Code.......................................... Paddult
Price, as described....................... \$24.00
Shipping weight, lbs.
Shipping measurement, cubic feet..
Above price does nut include pipe and fittings for comecting Lavatory with Closet.

Closet only, enameled inside, $\$ 15.00$.
Heary Pattern Valve, only $\$ 2.50$.
Lavatory with Self-closing Faucet, only $\$ 6.50$.

Cut Shows Sectional View of Prison Closet.

## "NEMO" ENAMELED HOPPER CLOSET.


$102 \cdot{ }^{\prime}$.
"Nemo" Tall Round Hopper, Porcelain Enameled Inside, Painted Outside, with Roll Top Flushing Rim; Oak Beaded and Varnished Zinc Lined Tank with $1 \frac{1}{4}$-inch Gooseneck Siphon, Noiseless Ball Cock and Oak Tank Board; 11/4-inch Oak Seat and Cover; $11 / 4$-inch Nickel-Plated Flush Pipe with Nickel-Plated Adjustable Elbow and Nickel-Plated Flush Pipe Strap.
$\qquad$
$\qquad$
Shipping weight, lbs...................................... ....................... .................................. 96
Shipping measurement, cubic feet............................ ....................................................... $71 / 4$

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 12 inches.

## "KELLY" AUTOMATIC WATER CLOSET.



104-C.
Porcelain Siphon Jet Bowl with Kelly's patent Hornless Connection; Galvanized Tank and Brackets; Iron Flush Pipe and Kelly's Automatic Valve ; Oak Seat attached to Valve ; NickelPlated Screws and Washers.

The action of the seat operates the valve and gives a strong after flush. There are no springs, weights or levers used. It is operated entirely by water pressure. When the seat is pressed down, the tank fills as far as the water pressure will compress the air in the tank, and when the seat is released, the compressed air drives the water from the tank into the closet with great force and will flush out the closet thoroughly and leave a re-fill of clean water.
Code Padelica
Price as described ..... $\$ 30.30$
Shipping weight, lbs ..... 96
Shipping measurement, cubic feet ..... $5^{1 / 2}$

Packed one in a barrel or eight in a crate.

## Roughing-in Measurement :

Distance from face of finished wall to center of outlet, .........inches.

## "KELLY" SELF-ACTING FROST-PROOF

AFTER FLUSH CLOSET.


106-C.

Oval Porcelain Hopper with Oak Seat; Galvanized Iron Tank and Brackets; ${ }_{2}^{\text {KFelly's } \text { !Frost- }}$ Proof Valve with weights and chain. We do not furnish Pipe or Trap with this"combination.
Code ..... Padellot
Price as described ..... $\$ 28.00$
Shipping weight, lbs ..... , 94
Shipping measurement, cubic feet ..... 51/2For above Combination with Oral Flush Rim Hopper Enameled Inside, deduct \$1.20.

Packed one in a barrel or ten in a crate.

## Roughing-in Measurement:

$\qquad$ inches.

## "KELLY" FROST-PROOF CLOSET.



108-C.

Cast Iron Hopper, Enameled Inside, with Oak Self-Raising Seat; Kelly's Frost-Proof Valve with chain weights and couplings. We do not furnish Pipes and Traps with this combination.

The water runs while the seat is occupied, and shuts off and empties the pipe above the valve when the seat is released.

Packed one in a barrel or eighteen in a crate.Code.
Price as described ..... $\$ 13.50$
Shipping weight, lbs ..... 79
Shipping measurement, cubic feet ..... $51 / 2$
Packed one in a barrel or eighteen in a crate.

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, $\qquad$ inches.

## AUTOMATIC SIPHON EDUCTION RANGE CLOSET.



An accurate knowledge of the relative position of parts will be gained by reference to the above drawings.

Full instructions for erecting and operating are furnished with each fixture.
Blue prints giving detailed dimensions of every part of complete Range, and full information essential to "roughing-in," will be sent on request.

This fixture, while already well known, has been improved so that the interval between flushes can be regulated as desired, but the minimum flush is much shorter than will ever be demanded by actual service conditions.

## AUTOMATIC SIPHON EDUCTION RANGE CLOSET.


$109-\mathrm{C}$.
With Siphon Eduction Copper-Lined Wood Tank; Galvanized Iron Flush Pipe; Hinged Oak Seats with Iron Reinforcements and Painted Iron Partitions.

| $\begin{gathered} \text { No. } \\ \text { of } \\ \text { Seats. } \end{gathered}$ | 24-Inch Seats. |  | 24 -Inch Seats. |  | 27-Inch Seats. |  | 27-Inch Seats. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Code. | Painted. | Code. | Enameled. | Code. | Painted. | Code. | Enameled. |
| 3 | Paderia .. | \$ 94.25 | Padersize..... | \$107.50 | Padetagers. | \$ 97.75 | Padetless...... | \$112.25 |
| 4 | Paderilla...... | 112.00 | Padership.... | 128.50 | Padetao.. ..... | 116.00 | Padetmatuer.. | 134.50 |
| j | Paderillas..... | 132.00 | Paderslide.... | 152.00 | Padetaria ..... | 137.50 | Padeton........ | 159.50 |
| 6 | Paderota ...... | 151.00 | Paderslips.... | 174.25 | Padetatos ..... | 157.25 | Padetonie..... | 183.50 |
| 7 | Paderraeo..... | 170.75 | Padersnow... | 197.50 | Padeteggi..... | 178.00 | Padetasas..... | 208.00 |
| 8 | Padersail ..... | 189.00 | Padersoon.... | 219.00 | Padeteras ..... | 197.50 | Padetudo ...... | 231.25 |
| 9 | Paderscent... | 208.50 | Paderuco... | 242.25 | Padeterizo.... | 219.25 | Padevamo.... | 257.00 |
| 10 | Paderschon .. | 227.50 | Paderzas. | 264.50 | Padeteval..... | 240.25 | Padeveld. | 280.75 |
| 11 | Padersee.. | 247.50 | Padesa.. | 287.25 | Padeticina.... | 261.50 | Padevet ... .... | 305.75 |
| 12 | Padershad.... | 267.25 | Padesana...... | 310.00 | Padeting ...... | 282.25 | Padevota ..... | 330.50 |
| 13 | Padershake... | 287.75 | Padesesis...... | 333.75 | Padetingly ... | 303.75 | Padezalig ..... | 355.50 |
| 14 | Padershoes... | 307.25 | Padessi......... | 357.00 |  |  |  |  |
| 15 | Padershot..... | 327.50 | Padessie. | 380.75 |  |  |  |  |

If Seat Covers are wanted, add $\$ 1.00$ each.
For above Range without Partition, deduct $\$ 6.50$ for each Partition.
For above Range with Painted Cast Iron Backs, add for 24 -inch Seat Range $\$ 6.50$; 27 -inch Seat Range, $\$ 7.50$ for each Back.

If Enameled Iron Seat Tops are desired in place of Wood Seats, add $\$ 2.25$ for each Seat.
If Seats are wanted stationary instead of hinged, deduct $\$ 0.50$ for each Seat.
Unless otherwise ordered, Range with Enameled Interior, 24 -inch Seats and Outlet at right end, as shown, will be sent.

Sectional views of Range are shown on page 58A.

## PARSONS' TROUGH WATER CLOSET.

Patented.

FOR SCHOOLS, FACTORIES, WORKSHOPS, RAILWAY STATIONS, TENEMENT HOUSES AND PUBLIC PLACES.

The Parsons' Trough Water Closet has been successfully used in Schools, Factories, etc., for many years past. The arrangement of each basin in the section at a slightly lower level with its weir or dam toward the outlet is novel and important, securing an equal flush to each with a minimum quantity of water-an important consideration when meter rates have to be paid. The flush is automatic at any desired interval.

The Closet comprises a system of two, three, four, five or six, to twelve-part Washout Water Closets combined in one apparatus, operated by one tank up to a six-part Closet; above six and up to a twelve-part Closet the apparatus is operated by two tanks, one at each end, but with a single outlet.

The result secured in the design of the Parsons' Trough Watei Closet is the advantage of having a body of water, such as is found in a Washout Closet, that may be automatically removed with all its contents at predetermined intervals.

The Flush Tank may be easily regulated to empty its contents with certainty at any given period; the quantity of water may also be controlled as desired.

The Trough, having no valve or complicated outlet, will not be choked up by any material which can pass through the outlet pipe, and this pipe may be of any size.

During hours when not in use, the water can be shut off.

110.C.

Section of Four Closets.


Distance between centers of basins, 27 inches.
The inlet and outlet connections of the Parson's Trough Water Closets being in the center of the ends, they can be set for either right or left hand outlet as desired.

## PARSONS' TROUGH WATER CLOSET.



Parsons' Cast Iron Trough Water Closet with Iron Standards and Automatic Flushing Tank. Cut shows water in motion.

| Sections for |  | Length, over all | Weight, crated, lbs. | Shipping meas., cu. ft. | Painted |  | Enameled |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code |  |  | Price | Code | Price |
| 2 | Persons |  | 5 ft .4 in . | 210 | $83 / 4$ | Padiglio | \$50.00 | Paedaret | \$65.00 |
| 3 | " | 7 " 7 " | 290 | $112 / 3$ | Padisha | 60.00 | Paedicate | - 80.00 |
| 4 | 6 | 9 " 9 " | 315 | $141 / 2$ | Padouan | 70.00 | Paeminos | 95.00 |
| 5 | " | 12 " 3 " | 510 | 183/4 | Padraste | 78.00 | Paenulati | 110.00 |
| 6 | " | 14 " 5 " | 600 | $213 / 4$ | Padrinaz | 86.00 | Paepsti | 130.00 |
| 7 | 6 | 16 " 10 " | 675 | 25 | Padrino | 120.00 | Paestano | 165.00 |
| 8 | " | 19 " | 750 | 28 | Padronal | 130.00 | Paffante | 180.00 |
| 9 | " | 21" 6 " | 915 | 32 | Padronness | 138.00 | Paffutos | 19500 |
| 10 | " | 24 " | 1025 | 36 | Paduaso | 146.00 | Paflone | 210.00 |
| 11 | " | 26 " 2 " | 1100 | 40 | Padulesco | $154.00$ | Pagadoir | 230.00 |
| 12 | " | 28 " 4 " | 1200 | 44 | Paedago | $162.00$ | Paganali | 250.00 |

Above prices do not include woodwork.
Above weights are for painted closets, enameled closets $121 / 2 \%$ heavier.
For ash seat as illustrated, add, per hole, $\$ 3.50$, weight 18 pounds.
For ash partitions between each basin, add, per hole, $\$ 2.50$, weight 25 pounds.
For the better class of work these closets may have partitions built between each basin, making separate compartments with doors arranged for each.

# WOLFF'S INDIVIDUAL BOWL SIPHON RANGE. 

FOR SCHOOLS, FACTORIES, PUBLIC INSTITUTIONS, ETC.



114-C.

Above sectional cut shows one section of Wolff's Individual Bowl Siphon Range, shown and listed on following page.

Each section, as shown above, is provided with a flushing rim cast integral with the Bowl; this flushing rim is connected to the Automatic Flushing Tank with a flush pipe, therefore, when tank operates and causes a thorough flushing of the Range, the flushing rims are also supplied with water flushing every part of the bowl itself. Each bowl has a large water surface- a great advantage in any style of Range Closets.

Seats furnished with Wolff's Ranges are of heavy construction and fitted with heavy cast brass trimmings-an important feature in School Work where hard usage is liable.

To insure satisfactory results, Range must be set level. The Air Pipe must be carried straight up from the Trap to proper height as shown on following pages.

Height from floor to top of seat is 15 inches; 10 -seat Double Ranges (five on a side) and less are furnished with 4 -inch Traps, 12 -seat Double Ranges (six on a side) and over, with 5 -inch Traps.

Five-seat Single Ranges and less are furnished with 4-inch Traps, and six-seat Single Ranges and over, with 5 -inch Traps.

Depth of water in each bowl ... inches. Depth of seal between bowls ... inches. Length of each section 24 or 27 inches.

Unless otherwise ordered, Ranges will be sent with outlets on left hand end, but when desired Ranges can be furnished with the Outlets on Right Hand End.

When Ranges are set up in exposed places and there is a liability of freezing, we would suggest, in order to obviate the danger as much as possible, that the Tanks, Flush Pipes, Bowls and Upper Trap be drained when not in use, or during vacation. For this purpose we provide a drain valve for the Tank and a drain Valve for the upper Trap. The drain Valve of Upper Trap should be connected with the Lower Trap by the plumber. Upon opening the valve, all the water in Upper Trap will be emptied into the Lower Trap.

We would further suggest that in localities of this kind, the Lower Trap be connected to the Upper Trap by a length of Soil Pipe, bringing the Lower Trap below the frost line.

## INDIVIDUAL BOWL SIPHON RANGE.



The above cut represents Wolff's Individual Bowl Siphon Range with Flushing Rims, Cast Iron Flush Pipes, Oak Seats with Heavy Brass Hinges, and Copper Lined Automatic Patent Flushing Tanks and Upper and Lower Traps, as shown.

Note: See page 61 for full description of above Siphon Range.
Air Pipe from Tank to Trap is not included in list prices.

| $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { Seats. } \end{aligned}$ | Shipping Weight, Lbs. | With 24 -inch Seats, as described. |  |  |  | With 27 -inch Seats, as described. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Painted. | Code. | Enameled. | Code. | Painted. | Code. | Enameled. |
| 3 | 225 | Paganize | \$ 82.25 | Pagotine | \$ 94.25 | Pajeabamo | \$84.75 | Palabrad | \$ 99.00 |
| 4 | 300 | Pagasico | \$ 97.50 | Pagurian | \$112.75 | Pajecillo | 100.75 | Palabrota | 116.50 |
| 5 | 375 | Pageant | 112.50 | Paguridal | 131.25 | Pajonism | 116.50 | Palabunt | 135.25 |
| 6 | 495 | Pagellar | 128.75 | Paideutic | 151.00 | Pajoniste | 133.75 | Palacious | 155.75 |
| 7 | 577 | Pagenstan | 144.00 | Pailebot | 169.25 | Pakarade | 150.50 | Palacrani | 175.75 |
| 8 | 660 | Paggerias | 159.25 | Paillard | 188.00 | Paketbote | 166.75 | Paladare | 195.50 |
| 9 | 742 | Paginante | 174.75 | Paillasso | 207.00 | Pakgaret | 182.50 | Paladeamo | 214.75 |
| 10 | 825 | Paginetto | 190.50 | Painelam | 226.00 | Pakkeld | 199.00 | Paladiale | 234.50 |
| 11 | 908 | Pagliett | 206.25 | Painstake | 245.00 | Pakkiste | 215.75 | Palafitt | 254.50 |
| 12 | 990 | Pagliuz | 222.25 | Pajanel | 264.50 | Paktolo | 232.00 | Palafren | 274.25 |
| 13 | 1072 | Pagmente | 238.00 | Pajarear | 283.50 |  |  |  |  |
| 14 | 1155 | Pagnone | 253.75 | Pajarille | 302.50 |  |  |  |  |
| 15 | 1238 | Pagodice | 269.50 | Pajazas | 321.50 |  |  |  |  |

For Galvanized Ring under Seat, add $\$ 1.50$ for each Seat.
Height from floor to top of seat is 15 inches; 5 -seat Ranges and less are furnished with 4 -inch Traps, 6 -seat Ranges and over with 5 -inch Traps.
Unless otherwise ordered, Ranges will be sent as shown, viz.: with outlet on left hand end, but when desired Ranges can be furnished with Outlet on Right Hand End.
Cast Iron Partitions and Backs can be furnished for above Ranges.
For Painted Cast Iron Partitions, add $\$ 6.00$ for each Partition. For Galvanized Cast Iron Partitions, add $\$ 10.00$ for each Partition.

For Painted Cast Iron Backs, add $\$ 6.75$ for each Back.
For Galvanized Cast Iron Backs, add $\$ 11.25$ for each Back.
Weight of each Partition, 100 lbs . Weight of each Back, 24 -inch, 100 lbs .; 27-inch, 150 lbs.

## INDIVIDUAL BOWL SIPHON CLOSET RANGE.



The above cut represents Wolff's Individual Bowl Siphon Range with Flushing Rims, Cast Iron Flush Pipes, Oak Seats with Heavy Brass Hinges, Painted Cast Iron Partitions and Backs and Copper Lined Automatic Patent Flushing Tanks and Upper and Lower Traps, as shown.

Note:-See page 61 for full description of above Siphon Range.
Air Pipes from Tanks to Traps are not included in list prices.


For Galvanized Ring under Seat, add $\$ 1.50$ for each Seat.
For Galvanizing Partitions, add $\$ 4.00$ for each Partition.
For Galvanizing Backs, add $\$+.50$ for each Back.
Height from floor to top of Seat is 15 inches; 10-Seat Ranges (five on a side) and less are furnished with 4 -inch Traps, 12 -Seat Ranges (six on a side) and over with 5 -inch Traps.
Unless otherwise ordered, Ranges will be sent as shown, viz.: with Outlet on Left Hand End, but when desired, Ranges can be furnished with the Outlets on Right Hand End.

## AUTOMATIC "BRIGHTON" OPEN SIPHON RANGE CLOSET.



118-C.
An accurate knowledge of the relative position of parts will be gained by reference to the above drawings.

Full instructions for erecting and operating are furnished with each fixture.
Blue prints giving detailed dimensions of every part of complete Range, and all information essential to "roughing-in," will be sent on request.

Approximate Weight Crated of "Brighton" Open Range Closet with 24 -inch Seats, As Shown in 120-C.

| No. of Seats | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tank, lbs................ | 80 | 80 | 100 | 110 | 140 | 160 | 175 | 180 | 190 | 195 | 200 | 220 | 230 |
| Trough, Seat, Frame and Legs, lbs.. | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| Trap, lbs. | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| Fittings, lbs | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| Total, lbs... | 705 | 805 | 925 | 1055 | 1165 | 1285 | 1400 | 1505 | 1615 | 1720 | 1825 | 1945 | 2055 | Partitions, 125 lbs.; 24 -inch backs, 110 lbs.; 27 -inch backs, 120 lbs.

In Orders and Specifications give Plate Numbers

## AUTOMATIC "BRIGHTON" OPEN SIPHON RANGE CLOSET.


$120 . \mathrm{C}$.
With Siphon Eduction Copper-Lined Wood Tank, Galvanized Iron Flush Pipe, Hinged Oak Seats with Iron Reinforcements, Oak Top Plate and Back Strip. Perforated Wash-Down Pipes fitted inside of Range (Brass on Enameled and Galvanized Iron on Painted Ranges).

| $\begin{gathered} \text { No. } \\ \text { of } \\ \text { Seats. } \end{gathered}$ | 24-Inch Seats. |  | 24-Inch Seats. |  | 27-Inch Seats. |  | 27-Inch Seats. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Code. | Painted. | Code. | Enameled. | Code. | Painted. | Code. | Enameled. |
| 2 | Pallacar | \$ 64.25 | Pallottini | \$ 75.75 | Palmigrad | \$ 66.25 | Palmzond | \$ 78.75 |
| 3 | Pallacines | 74.75 | Palimaceo | 89.50 | Palmipor | 77.75 | Palmzuck | \$ 94.00 |
| 4 | Palladore | 85.25 | Palmadill | 103.50 | Palmister | 89.25 | Palombin | 109.25 |
| 5 | Pallakopa | 98.75 | Palmate | 120.25 | Palmkolbe | 104.25 | Palomilla | 127.75 |
| 6 | Pallasemo | 112.25 | Palmavist | 137.00 | Palmmark | 118.25 | Palotada | 145.50 |
| 7 | Pallatina | 126.00 | Palmbaum | 153.75 | Palmoped | 132.75 | Paloteos | 163.75 |
| 8 | Pallatores | 138.25 | Palmbohr | 169.25 | Palmotead | 146.50 | Paloteur | 181.25 |
| 9 | Pallafact | 150.25 | Palmella | 184.75 | Palmoule | 161.25 | Palpabile | 199.75 |
| 10 | Pallescun | 163.50 | Palmentos | 201.25 | Palmsap | 175.50 | Palpades | 217.25 |
| 11 | Palliate | 176.50 | Palmesana | 217.25 | Palmspier | 190.00 | Palpadora | 235.50 |
| 12 | Pallidette | 189.50 | Palmesell | 233.75 | Palmstock | 204.50 | Palpament | 253.75 |
| 13 | Pallidore | 203.50 | Palmetazo | 251.00 | Palmule | 219.25 | Palpamina | 272.25 |
| 14 | Pallodes | 216.75 | Palmhout | 267.50 |  |  |  |  |
| 15 | Palloribus | 230.25 | Palmicorn | 284.50 |  |  |  |  |

If Seat Covers are wanted, add $\$ 1.00$ each.
Painted Cast Iron Tanks can be furnished if desired without extra charge. Lead-Lined Tanks can be furnished to order. (Prices on application.)
The above arrangement is such that carpenter may put in wood partition if desired.
Unless otherwise ordered, Range with Enameled Interior, 24 inch Seats and Outlet on right end, as shown, will be sent.

Sectional views of Range are shown on page 64 .

## AUTOMATIC "BRIGHTON" OPEN SIPHON RANGE CLOSET.


$1201 / 2-\mathrm{C}$.
With Siphon Eduction Copper-Lined IWood Tank; Galvanized Iron Flush Pipe; Hinged Oak Seats with Iron Reinforcements; Oak Top Plate and Back Strip, and Painted Iron Partitions. Perforated Wash-Down Pipes fitted inside of Range (Brass on Enameled and Galvanized Iron on Painted Ranges).

| $\begin{aligned} & \text { No. } \\ & \text { of } \\ & \text { Seats. } \end{aligned}$ | 24-Inch Seats. |  | 24-Inch Seats. |  | 27-Inch Seats. |  | 27-Inch Seats. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Code. | Painted. | Code. | Enameled. | Code. | Painted. | Code. | Enameled. |
| 2 | Palpamise ..... | \$83.75 | Palpaness..... | \$ 95.25 | Palpapacy.... | \$85.75 | Palpapilla..... | \$ 98.25 |
| 3 | Palpamity.... | ${ }^{100.75}$ | Palpanffia ..... | \$115.50 | Palpapada.... | 103.75 | Palpapion..... | \$120.00 |
| 4 | Palpamobur.. | 117.75 | Palpanges..... | 136.00 | Palpapal ...... | 121.75 | Palpapoter ... | 141.75 |
| 5 | Palpamocca.. | 137.75 | Palpangon ... | 159.25 | Palpaparia ... | 143.25 | Palpapou...... | 166.75 |
| 6 | Palpamodess | 157.75 | Palpanit....... | 182.50 | Palpapasso... | 163.75 | Palpapoula ... | 191.00 |
| 7 | Palpamoll.... | 178.00 | Palpanitre.... | 205.75 | Palpapanti ... | 184.75 | Palpapyro.... | 215.75 |
| 8 | Palpamote ... | 196.75 | Palpanjata ... | 227.75 | Palpaparel ... | 205.00 | Palpapyrus... | 239.75 |
| 9 | Palpamour ... | 215.25 | Palpanlela.... | 249.75 | Palpapegat... | 226.25 | Palpaqueto... | 264.75 |
| 10 | Palpamuba... | 235.00 | Palpanlell..... | 272.75 | Palpapelao ... | 247.00 | Palpaquife.... | 288.75 |
| 11 | Palpamutte... | 254.50 | Palpanlian ... | 295.25 | Palpapelon... | 268.00 | Palpaquons... | 313.50 |
| 12 | Palpan ......... | 274.00 | Palpanlios.... | 318.25 | Palpapesco... | 289.00 | Palpaquote... | 338.25 |
| 13 | Palpanage.... | 294.50 | Palpanlizo.... | 342.00 | Palpapier...... | 310.25 | Palpaquox.... | 363.25 |
| 14 | Palpandola... | 314.25 | Palpanlume .. | 365.00 |  |  |  |  |
| 15 | Palpanenope | 334.25 | Palpanlyse ... | 388.50 |  |  |  |  |

If Seat Covers are wanted, add $\$ 1.00$ each.
If with Painted Cast Iron Backs, add to 24 -inch Seat Range $\$ 6.50$ for each Back; 27 -inch Seat Range, $\$ 7.50$ for each Back.

Painted Cast Iron Tanks can be furnished, if desired, without extra charge. Lead-Lined Tank can be furnished to order. (Prices on application.)

Unless otherwise ordered, Range with Enameled Interior, 24 -inch Seats and Outlet on right end, as shown, will be sent.

Sectional views of Range are shown on page 64.

## AUTOMATIC "BRIGHTON" OPEN SIPHON DOUBLE RANGE GLOSET.


121.C.

With Siphon Eduction Copper-Lined Wood Tanks; Galvanized Iron Flush Pipes; Hinged Oak Seats with Iron Reinforcements; Oak Top Plates and Back Strips and Painted Iron Partitions and Backs; Perforated Wash-Down Pipes fitted Inside of Ranges (Brass on Enameled and Galvanized Iron on Painted Ranges).

| $\begin{gathered} \text { No. } \\ \text { of } \\ \text { Seats. } \end{gathered}$ | 24-Inch Seats. |  | 24-Inch Seats. |  | 27-Inch Seats. |  | 27-Inch Seats. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Code. | Painted. | Code. | Enameled. | Code. | Painted. | Code. | Enameled. |
| 4 | Palparla | \$182.50 | Palpitant | \$205.50 | Paltiel | \$188.50 | Paludige | \$213.50 |
| 6 | Palpativo | 224.00 | Palpitaro | 253.50 | Paltonate | 233.00 | Paludiva | 265.50 |
| 8 | Palpatore | 265.50 | Palpitone | 302.00 | Paltoquet | 277.50 | Paludosas | 317.50 |
| 10 | Palpavel | 313.00 | Palponis | 356.00 | Paltram | 329.00 | Palumbino | 376.00 |
| 12 | Palpebra | 360.50 | Palporum | 410.00 | Paltrily | 378.50 | Palumbos | 433.00 |
| 14 | Palperiez | 408.50 | Palrador | 464.00 | Paludano | 429.00 | Palumbuli | 491.00 |
| 16 | Palpeur | 453.50 | Palratori | 515.50 | Paludatos | 478.00 | Palurdes | 547.50 |
| 18 | Palpifera | 498.00 | Palsgrave | 567.00 | Palude | 529.00 | Palustral | 606.00 |
| 20 | Palpiform | 545.00 | Palsical | 620.50 | Paludello | 579.00 | Pambores | 662.50 |
| 22 | Palpimane | 591.50 | Palster | 673.00 | Paludicas | 629.50 | Pamfilio | 720.50 |
| 24 | Palpitado | 638.00 | Paltata | 726.50 | Paludier | 680.00 | Pamisos | 778.50 |

If Seat Covers are wanted, add $\$ 1.00$ each.
Painted Cast Iron Tanks can be furnished, if desired, without extra charge. Lead-Lined Tanks, can be furnished to order. (Prices on application.)
Width of above Double Range and Partitions, as shown, 52 inches. From center to center of Outlets 22 inches.

Unless otherwise ordered, Ranges with Enameled Interior, 24 -inch Seats and Outlets on right end, as shown, will be sent.

Sectional views of Range are shown on page 64.

## "NEPTUNE" MARINE PUMP WATER CLOSET.

## (Howell's Patent)

For Battleships, Rams, Monitors, Cruisers, Yachts and all other vessels which require the placing of their water closets either below the water line or at so slight an elevation above it as to necessitate the use of a pump to eject the contents.

Handsome in appearance, durable of construction and possessing features which are entirely novel and of such importance as to recommend the closet at once to all who are interested in modern naval architecture.

It is controlled entirely by one lever; there are no pulls or foot treadles to be operated before water can enter bowl.

An overflow is impossible; in addition to the usual safeguards provided in this type of Water Closet, the "Neptune" possesses one very important advantage-the supply valve cannot be opened except by operating the lever wnich controls the discharge pump, therefore, to overflow the bowl either designedly, by accident or by inadvertently holding the supply valve open too long (which may occur in all other pump closets), is impossible with the "Neptune."

The bowl can never be left without standing water, which is accumulated in the refill chamber during the act of pumping out the closet. As this chamber retains the exact amount of water required to refill the bowl, it can never be overcharged.

No special instruction is required to operate the "Neptune." From eight to ten full strokes of the lever are usually sufficient to eject the contents of bowl and will always provide the necessary refill.

The "Neptune" will work satisfactorily in any location, either above the water line; the supply pipe may be carried out board, connected with a tank, or water may be lifted should the closet be located above the source of supply.


122-C.

## Plan and Dimensions of "Neptune" Water Closet.

Length over all, 23 inches; depth from front of seat to back of discharge coupling, $311 / 4$ inches; height from deck to top of seat, 17 inches; height from deck to end of lever, $31 \frac{1}{2}$ inches; supply pipe, $11 / 4$ inches; discharge pipe, 2 inches.

Accompanying cut shows Left Hand Closet.
Closet may be furnished with discharge pump and lever on right hand side of closet, if so desired Left Hand Closet will always be furnished unless otherwise ordered.

## "NEPTUNE" MARINE PUMP WATER CLOSET.

(Howell's Patent)
ONE LEVER DOES THE WORK.


123-C.
"Neptune" Water Closet with Galvanized Iron Base-Plate, American Vitreous Porcelain pedestal Bowl, highly finished Mahogany Seat and Cover attached to bowl, Brass combined Supply Pump and Inlet Valve, and Discharge Pump finished in fine white enamel; Bent Supply and Discharge Couplings, Brass Lever and other trimmings nickel-plated.
Code Pamoisir
Price as described ..... $\$ 162.00$Shipping weight, lbs
$\qquad$

The "Neptune" Closet can be furnished to order as follows:
With heavily Silver-Plated trimmings, $\$ 25.00$ extra.
With Bowl decorated with burnished gold bands, $\$ 10.00$ extra.
With Quartered Oak seat, same price as Mahogany.
With discharge Pump and Lever on right hand side, same price as above.
With straight Supply and Discharge Couplings, same price as bent.

# "NEPTUNE JR." MARINE PUMP WATER CLOSET. 

(Howell's Patent)

The great success attending the introduction of the "Neptune" Water Closet has led to the construction of a smaller closet, the "Neptune Jr.," which is designed for yachts, torpedo boats and small craft where space is too limited to receive the regular "Neptune" Closet.

The "Neptune Jr." differs from the "Neptune" in size only, in other respects the two closets are identical.

Note: See page 68 for description.

Plans and Dimensions of "Neptune Jr." Water Closet:


124-C.

Length over all, $191 / 2$ inches; depth from front of seat to back of discharge coupling, $261 / 2$ inches; height from deck to top of seat, 16 inches; deck to end of lever, $301 / 2$ inches; supply pipe, 1 inch; discharge pipe, $11 / 2$ inches.

## "NEPTUNE JR." MARINE PUMP WATER CLOSET.

(Howell's Patent)

```
SMALL PATTERN "NEPTUNE" CLOSET FOR YACHTS AND OTHER CRAFT.
```

ONE LEVER DOES THE WORK.


125-C.
The "Neptune Jr." Water Closet with Galvanized Iron Base-Plate, American Vitreous Porcelain Pedestal Bowl, highly finished Mahogany Seat and Cover attached to bowl, Brass Combined Supply Pump and Inlet Valve, and Discharge Pump finished in fine white enamel; bent Brass Supply and Discharge Couplings, Brass Lever and other trimmings nickel-plated.
Code.Pampanás
Price complete as described ..... $\$ 150.00$Shipping weight, lbs.

The " Neptune Jr." Closet can be furnished to order as follows With heavily Silver-Plated Trimmings, $\$ 20.00$ extra.
With bowl decorated with burnished gold bands, $\$ 10.00$ extra. With Quartered Oak Seat and Cover, same price as Mahogany: With straight Supply and Discharge Couplings, same price as bent. With Discharge Pump and Lever on right hand side, same price as above.

## "COLUMBIA" PEDESTAL SHIP WATER CLOSET.

(Patented.)<br>\section*{SINGLE VALVE.}



126 -

The "Columbia" Water Closet, with Galvanized Iron Base-plate, American Vitreous Porcelain Pedestal Bowl; highly finished Mahogany Seat and Cover attached to bowl; Porcelain Enameled Pull Post, heavy cast Brass Valve Box and Operating Mechanism and $11 / 2$-inch Brass Supply Valve; all exposed Brass Trimmings Nickel-Plated except Seat Hinges and Pull Post Fittings, which are heavily Silver-Plated.
Code Pamparigo
Price complete as described ..... $\$ 118.50$
Shipping weight, lbs. ..... 294

## Dimensions:

Height from deck to top of seat, $191 / 2$ inches; width from side to side, 22 inches, depth from front of seat to bulkhead back of closet, 28 inches; distance from center of outlet to bulkhead back of closet, 16 inches.

The "Columbia" Water Closet is in successful operation on vessels of the United States Navy, also on the International Navigation Company's steamers.

## "PACIFIC" PEDESTAL SHIP WATER CLOSET.

(Patented.)
SINGLE VALVE.


127-C.
The "Pacific" Water Closet with Galvanized Iron Base-Plate, American Vitreous Porcelain bowl with Enameled Iron Pedestal, highly finished Mahogany Seat and Cover attached to bowl, Porcelain Enameled Pull Post, heavy cast Galvanized Iron Valve Box, heavy cast brass operating mechanism and $11 / 2$-inch brass supply valve; all exposed brass trimmings are nickel-plated.

## Code.

 PamperizePrice complete as described................................................................................................. 50
Shipping weight, lbs. $\qquad$
The "Pacific" Water Closet is constructed upon the same general plan as the "Columbia."

## Dimensions :

Height from deck to top of seat, $191 / 2$ inches; width from side to side, 22 inches; depth from front of seat to bulkhead back of closet, 28 inches; distance from center of outlet to bulkhead back of closet, 16 inches.

## "ATLANTIC" SHIP WATER CLOSET.

(Patented.)<br>SINGLE VALVE.



128-C.
The "Atlantic" Water Closet with Galvanized Iron Base-Plate; American Vitreous Porcelain Bowl with flushing and re-fill Rim, highly finished Mahogany Seat and Cover attached to bowl; Enameled Iron Pull Post with Brass Cap and Stirrup Handle and Cast Brass Valve Box, Supply Valve and operating mechanism; all exposed brass trimmings are nickel-plated.

$$
\begin{aligned}
& \text { Code ...... ........................................................................................................ Pamphilus } \\
& \text { Price complete as described....... .............................................................. .......... \$68.50 } \\
& \text { Shipping weight, lbs................................................................ . .. ...................... } 233
\end{aligned}
$$

The "Atlantic" is a high class ship water closet of moderate cost; attractive in appearance, perfect in operation and thoroughly well made in every detail.

## Dimensions:

Height from deck to top of seat $181 / 2$ inches; width from side to side, 20 inches; depth from front of seat to back of closet, 22 inches; distance from center of outlet to back of closet, 12 inches.

## †"DELAWARE" SHIP WATER CLOSET.



129-c.
The "Delaware" Water Closet with Galvanized Iron Base-Plate, Porcelain Lined Iron Bowl with Oak Seat attached, Galvanized Iron Pull Post and Valve Box, Brass Supply and Outlet Valves, and brass trimmings.

Code.... Pampilion
Price complete as described. $\$ 16.00$
Shipping weight, lbs.
Owing to the great durability of its construction, the "Delaware" is especially adapted for use as a crew water closet.

## Dimensions:

Height from deck to top of seat, $18 \frac{1}{2}$ inches; width from side to side, 21 inches; depth from front of seat to back of closet, 24 inches.
$\dagger$ Carried in San Francisco only.

## $\dagger$ "SAND'S" PUMP WATER CLOSET.

(Sand's Patent)

FOR YACHTS, LAUNCHES, NAVAL VESSELS, ETC., ABOVE OR BELOW WATER LINE.


131-C.
"Sand's" Pump Water Closet with Galvanized Iron Base-Plate, Oval Embossed Flushing Rim, Vitreous Porcelain Bowl, highly finished Oak Seat and Cover attached to bowl with Nickel-Plated Brass Hinges, Brass Pump and Valve, Improved Foot Valve, Polished Brass Brake with Hardwood Handle.
$\qquad$Price as described.$\$ 80.00$
Shipping weight, lbs. ..... 200
Shipping measurement, cubic feet. ..... 6

## Dimensions:

Height from deck to top of seat, 19 inches; width from side to side, 22 inches; depth from front of seat to bulkhead back of closet, 19 inches; from end of outlet coupling to deck, 7 inches; from center of supply coupling to deck, $21 / 2$ inches; Supply Connection, $3 / 4 \mathrm{inch}$; Discharge Connection, $11 / 2$ inches.
The improved Foot Valve used on all these closets is so constructed that it closes with the pressure, not against it. It has no spring to wear and become weak, no packing gland to leak, no joints to drip and will not get out of order.
Cut illustrates Right Hand Fixture, can be furnished either right or left hand. Left hand always sent unless otherwise directed.
$\dagger$ Carried in San Francisco only.

## †" DANDY" PUMP WATER CLOSET.



132-C.

Round Flushing Rim Porcelain Bowl, highly finished Oak Seat and Cover with heavy NickelPlated Brass Hinges attached to bowl, Composition Metal Pump and Connections, Improved Foot Valve, Brass Brake with Handle.
Code. Pamplina
Price as described. ..... $\$ 80.00$
Shipping weight, lbs. ..... 160
Shipping measurement, cubic feet ..... 4

## Dimensions:

Height from base to top of seat, 14 inches; width from side to side, 21 inches; depth from front of seat to bulkhead back of closet, 15 inches. Supply Connection, $3 / 4 \mathrm{inch}$. Discharge Connection, $11 / 2$ inches.

Cut illustrates Right Hand Fixさure, can be furnished either right or left hand.
Left Hand Fixture always shipped unless otherwise directed.
$\dagger$ Carried in San Francisco only.

# †"KNOCKABOUT" PUMP WATER CLOSET. 

(Sand's Patent)<br>A-SMALL FIXTURE, ADAPTED FOR USE IN YACHTS AND LAUNCHES.



133 - C.

Round Porcelain Flushing Rim Bowl; Oak Seat and Cover with Nickel-Plated Brass Hinges All parts of Pump Composition Metal.

High grade in every particular. Where small or light weight closet is desired, this fixture is unsurpassed, combining all the practical sanitary features of the larger styles with economy in space, weight and price.

Space occupied, $14 \times 18$ inches; Cylinder, $21 / 2$ inches diameter; height, to top of bowl, $111 / 2$ inches; to top of pump handle, 14 inches; Supply Connection, $3 / 4 \mathrm{inch}$; Discharge Connection, $11 / 2$ inches.

Cut illustrates Right Hand Fixture, can be furnished right or left hand. Left Hand Fixture always shipped unless otherwise directed.
$\dagger$ Carried in San Francisco only.

## $\dagger$ H. M. \& S. SHIP WATER CLOSET.

FOR USE ABOVE WATER LINE WITH SUPPLY FROM TANK OVERHEAD OR PRESSURE.


Porcelain Fan Wash Lead Covered Bowl, Brass Clapper Valve with Stuffing Nut on Axle and Brass Valve Pull.

Code

Pampress

Price as described
$\$ 20.00$
Shipping weight, lbs
60
Shipping measurement, cubic feet.
3

## Dimensions:

Outside diameter of top, 14 inches; height from flange to top bowl, $161 / 2$ inches; Outlet, 4 inches; Supply, 3/4 inch.


## †SHIP CLOSET COCK.

## WITH COUPLING NUT AND TUBE.

 $3 / 4-I N C H$. FOR LEAD PIPE.| Code. | Panacar | Panache |
| :---: | :---: | :---: |
| Style | Fin. Hndl. | N. P. Hndl |
| Per dozen | \$40.00 | 42.00 |
| Weight per doz., lbs ........... | 18 | 18 |

One half dozen in a package.
$\dagger$ Carried in San Francisco only

## "VITREOUS CHINA" CLOSET BOWLS.



140-C.
PLAIN SIPHON PINNACLE JET. CENTER OUTLET. TOP INLET.

Code. $\qquad$ Panacino
With Seat Attachment and $11 / 2$-inch Spud $\$ 18.00$
Code. $\qquad$ . Panacrat
With Seat Attachment and 2-inch Spud.. . $\$ 18.00$


141-C.
EMBOSSED SIPHON PINNACLE JET. CENTER OUTLET. TOP INLET.

Code. Panadead
With Seat Attachment and $11 / 2$-inch Spud $\$ 19.00$
Code $\qquad$ Panaggio
With Seat Attachment and 2-inch Spud... $\$ 19.00$

Shipping weight, each crated, lbs.
Shipping measurement, each crated, cubic feet. 4

## Roughing-in Measurement:

High Tank Combination, distance from face of finished wall to center of outlet, $113 / 4$ inches. Low Down Combination, distance from face of finished wall to center of outlet, $141 / 4$ inches.

Drawings and Measurements of 140-C and 141-C.


Diagram showing top of Bowl 'and giving measurements.


Diagram showing Base of Bowl and giving the closest measurement at which Bowl can be set.

These Bowls have double jet pipes, which make them a very strong, positive and quick-working Bowl. They have center outlet, and have the largest water area of any Siphon jet bowl on the market, the water surface measuring $11 \times 13$ inches.

Packed 12 in a crate. Approximate weight per crate, 650 pounds.

## "VITREOUS CHINA" CLOSET BOWLS.


148.C.

PLAIN WASH DOWN SIPHON. CENTER OUTLET. WITH DEEP JET.

Code Panatella
With Seat Attachment and $1 / 4$-inch Spud $\$ 10.75$

149.C.

EMBOSSED WASH DOWN SIPHON. CENTER OUTLET. WITH DEEP JET

Code. Pancale
With Seat Attachment and $1 / 4$-inch Spud $\$ 11.75$
$\qquad$
Shipping weight, each crated, lbs 50
Shipping measurement, each crated, cubic feet 4

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 13 inches.

Drawings and Measurements of 148-C and 149-C.


Diagram showing top of Bowl and giving measurements.


Diagram showing base of Bowl and giving the closest measurement at which Bowl can be set.

This is the best Center Outlet Wash-Down Siphon Bowl on the market. It has a jet inside of bowl at back, rumning down to the water line; the full force of the water as it leaves the jet comes directly in contact with the contents of the bowl, forcing the soil through the trap, thus insuring a perfect discharge at each operation of the closet and does not depend entirely on siphonic action. It has a full round trap throughout, $23 / 4$ inches in diameter; water seal, $33 / 4$ inches, and surface of water measuring $71 / 2 \times 81 / 2$ inches.

Packed 12 in a crate; approximate weight, per crate, 600 pounds.

## "VITREOUS CHINA" CLOSET BOWLS.


150.C.

PLAIN WASH DOWN SIPHON. REAR OUTLET. WITH DEEP JET.

Code $\qquad$ Pancarpia

151.C.

EMBOSSED WASH DOWN SIPHON. REAR OUTLET. WITH DEEP JET.

Code. Panche

With Seat Attachment and 2 -inch Spud... $\$ 12.00$

Code $\qquad$ Pancarte

With Seat Attachment and 2-inch Spud... \$11.00

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, high tank combinations, $93 / 4$ inches ; low tank combinations, 13 inches.

Shipping weight, each crated, lbs.
Shipping measurement, each crated, cubic feet.
Drawings and Measurements of $150-\mathrm{C}$ and $151-\mathrm{C}$.


Diagram showing top of Bowl and giving measurements.


Diagram showing base of Bowl and giving the closest measurement at which Bowl can be set.

This is the best Rear Outlet Wash Down Siphon Bowl on the market. It has a jet inside of bowl at back running down to the water line; the full force of the water as it leaves the jet comes directly in contact with the contents of the bowl, forcing the soil through the trap, thus insuring a perfect discharge at each operation of the closet and does not depend entirely on siphonic action.

It has a full size round trap throughout, $23 / 4$ inches in diameter; water seal, $3 \frac{3 / 4}{}$ inches, and surface of water measuring, $71 / 2 \times 81 / 2$ inches.

Packed 12 in crate; approximate weight, per crate, 600 pounds.

## "VITREOUS CHINA" CLOSET BOWLS.



155-C.
PLAIN WASH DOWN SIPHON. CENTER OUTLET. WITH SHORT JET.
Code
Panchetto
With Seat Attachment and $1 / 1 / 4$-inch Spud $\$ 9.25$


156-C.
PLAIN WASH DOWN SIPHON. REAR OUTLET WITH SHORT JET.
Code Panchlor
With Seat Attachment and 11/4-inch Spud $\$ 9.25$ Code Panchrest

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet on high tank combinations for center outlet Bowls, 13 inches; for rear outlet Bowls, $93 / 4$ inches. On low down combinations, 13 inches.

$\dagger 157 . \mathrm{C}$.
PLAIN WASH DOWN SIPHON JET. HOPPER AND TRAP.
21/4-inch Trap. $33 / 4$-inch Seal. Surface of water, $7 x 8$ inches.
Code
Panchrom
With Seat Attachment and 1/1/4-inch Spud. $\$ 10.75$

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, 13 inches.
Shipping weight of all Bowls on this page, lbs.
Shipping measurements of all Bowls on this page, cubic feet.
$\dagger$ Carried in San Francisco only.
"VITREOUS CHINA" CLOSET BOWLS.


$$
\text { APTOS NO. } 2 \text { EMBOSSED FRONT WASHOUT PEDESTAL. } 1^{11 / 4-I N C H ~ I N L E T . ~}
$$

Code
Pancista
No. 2-W Washout Pedestal Seat Attachment. No rent........................................................ $\$ 13.00$
Over all, inches................................................................................................................ 22
Top, inches ...................................................... ...................................................... $14 \times 17$
Shipping weight, lbs.......................................................................................................... 55
Shipping measurement, cubic feet.................................................................................... 4
Roughing-in Measurement:
Distance trom face of finished wall to center of outlet, $93 / 4$ inches.
REGULAR PORCELAIN CLOSET BOWLS.

16.) C.

No. 3. PLAIN WASHOUT WITH SEAT ATTACH.
MENT. NO VENT.
9.50
Pandaran ..... 10.50
Shipping weight, each crated, lbs ..... 50
Shipping measurement, each crated, cubic feet ..... 4

## Roughing-in Measurements:

Distance from face of finished wall to center of outlet, 9 inches.
$\dagger$ Carried in San Francisco only:

## "REGULAR PORCELAIN" CLOSET BOWLS.


$\dagger 170 . \mathrm{C}$.
No. 3 PLAIN OFFSET WASHOUT BOWL WITH SEAT ATTACHMENT. NO VENT.
Code Pandecte
No. 3 Plain Offset Washout with Seat Attachment and $1 / 1 / 4$-inch Spud. No V'ent. ..... $\$ 8.75$
Shipping weight crated, lbs. ..... 42
Shipping measurement, cubic feet
Shipping measurement, cubic feet ..... 4 ..... 4

## Roughing-in Measurement:

Distance from face of finished wall to center of outlet, $111 / 2$ inches.

$\dagger 172 . \mathrm{c}$.

## SHORT OVAL FLUSH RIM HOPPER.

Outside of Top, $133 / 4 \times 16$ inches. Height from
Flange to Top, $91 / 2$ inches. Outlet, 4 inches. $11 / 4$-inch Inlet Spud.

Code.
Pandemia
Short Oval Flush Rim Hopper............ $\$ 3.90$
Shipping weight each, lbs.................... 22
Shipping measurement, cubic feet........ $21 / 2$

+174-C.
SHORT ROUND FLUSH RIM HOPPER.
Outside diameter of Top, 14 inches. Height from Flange to Top, $91 / 2$ inches. Outlet, 4 inches. $11 / 4$-inch Inlet Spud.

Code.............................................. Pandicol
Short Round Flush Rim Hopper......... $\$ 2.90$
Shipping weight each, lbs.................... 20
Shipping measurement, cubic feet........ 2
$\dagger$ Carried in San Francisco only.

## $\dagger " C O L M A "$ CLOSET.


176.C.

SHORT OVAL FLUSHING RIM PORCELAIN HOPPER.
(133/4 x 16 inches outside top measurement), 4-inch Cast Iron Trap, Enameled inside, with 2-inch Hub for Vent, and three $13 / 4$-inch Brass Clamps.

Code. Pandisse

Price as described........................................................................................ $\$ 7.50$
Distance from center of outlet in bowl to center of outlet in trap, inches..................... $101 / 2$
Height from floor, inches...................................................................................... 163/4.
Shipping weight, lbs.......................................................................................................................... 40
Shipping measurement, cubic feet........................................................................ 3
†"TOWNSEND" CLOSET.

178.C.

179.C.

## SHORT OVAL FLUSHING RIM PORCELAIN HOPPER.

( $1333 / 4 \times 16$ inches outside top measurement), 4-inch Porcelain Trap with 2-inch Vent Spud and Clamps.
Code. Pandorga
Price as described. ..... $\$ 7.50$
Distance from center of outlet in bowl to center of outlet in trap, inches ..... $101 / 2$
Height from floor to top of bowl, inches ..... $81 / 2$
Shipping weight, lbs ..... 45
Shipping measurement, cubic feet ..... $31 / 2$

+ Carried in San Francisco only.


## PORCELAIN FLUSH RIM HOPPERS.



TALL ROUND FLUSHING RIM PORCELAIN HOPPER. SEAT ATTACHMENT
$1^{1}{ }^{\prime}$-inch Inlet. 4 -inch Outlet. Height from Flange to Top, $14^{1 / 2}$ inches.
Code
Tall Round Flush Rim Porcelain Hopper with $1_{1}^{1 / 4}$-inch Spud
Shipping weight, lbs.
Shipping measurement, cubic feet.

## JERSEY HOPPER.


$\dagger$ 183. ${ }^{\circ}$.
TALL OVAL FLUSHING RIM PORCELAIN HOPPER. SEAT ATTACHMENT. $1^{11} 4$-inch Inlet. 4 -inch Outlet. Height from Flange to Top, 16 inches.
Code Pandours
Tall Oval Flushing Rim Porcelain Hopper with $1^{1 / 1 / 4}$-inch Spud. ..... $\$ 7.25$
Shipping weight, lbs. ..... 40
Shipping measurement, cubic feet. ..... $33 / 4$$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED CLOSET BOWLS.


185. (.

ENAMELED IRON FRONT WASHOUT. $1^{1 / 4-I N C H}$ INLET. ROLL TOP FLUSHING RIM.
Code.
Pandowy Enameled inside and outside Washout with Roll Rim and Seat Lugs. No Vent...... $\$ 13.75$
Pandroso " " Painted " $"$ "
Pandspel " " " $\quad$ " $\quad$ " $\quad$ " $\quad$ " 6 With Vent...... 11.50

Shipping measurement each, cubic feet ......................................................1/2
Distance from face of finished wall to center of outlet, $91 / 2$ inches.


$$
\begin{aligned}
& \text { ENAMELED IRON SIPHON JET. ROLL } \\
& \text { TOP. FLUSHING RIM. }
\end{aligned}
$$

Code.
Pandya Enl'd inside and outside with $11 / 2$-in. Spud $\$ 18.00$ Paneas " " " " " 2 -in. " 18.00
Shipping weight, lbs................................ 80
Shipping meas., cubic feet.
Distance from face of finished wall to center of outlet, for High Tank combination, 12 inches; for Low Down combination, $133 / 4$ inches.

189.C.

ENAMELED IRON WASH DOWN SIPHON. ROLL TOP. FLUSHING RIM.

Code.
Panelle Enl'd inside and outside with $1, \frac{1}{4}-\mathrm{m}$. Spud $\$ 17.00$
Panemone " " " 6 " 2 -in. " 17.00
Panerina " "Painted " " $1^{11 / 4}$-in. " 15.00

Paneroti " " " " " 2-in. " 15.00
Shipping weight, lbs................................ 8.5
Shipping meas., cubic feet........................ 4
Distance from face of finished wall to center of outlet, for High Tank combinatinon, 13 inches; for Low Down combination, 15 inches.

## TALL FLUSHING ROLL RIM HOPPERS.


+191-C.

TALL ROUND ENAMELED INSIDE, PAINTED OUTSIDE. $11 / 4 \cdot I N C H$ SPUD AND COUPLING.

| Code | Panetela |
| :---: | :---: |
| Each | \$10.00 |
| Shipping weight each, lbs. | 48 |
| Shipping measurement, cubic feet....... | $41 / 2$ |
| Outside diameter of top, inches............ | 161/4 |
| Height from flange, inches................. | 153/8 |
| Center to center of seat lugs, inches .... | $51 / 2$ |
| Outlet for 4 -inch cast iron soil pipe. <br> Distance from center of outlet to face ished wall, $11 \frac{1 / 2}{}$ inches. | of fin- |



TALL OVAL ENAMELED INSIDE, PAINTED OUTSIDE. $11 / 4-\operatorname{INCH}$ SPUD AND COUPLING.

Code.. ............................................. Panfane
Each................................................. $\$ 11.00$
Shipping weight each, lbs...... ........... 50
Shipping measurement, cubic feet........ $43 / 4$
Outside measurement of top, inches.... $161 / 2 \times 15$
Height from flange, inches.................. $161 / 8$
Center to center of seat lugs, inches..... $51 / 2$
Outlet for 4 -inch cast iron soil pipe.
Distance from center of outlet to face of finished wall, $7^{1 / 2}$ inches.

The above hoppers may be used with or without wood seats.

[^2]
## HOPPER AND TRAP VALVE CLOSETS.

WITH ROUND SELF-RAISING SEATS AND ECLIPSE DOUBLE-ACTING SEAT VALVES.

```
HOPPERS ENAMELED INSIDE AND PAINTED OUTSIDE.
```

TRAPS PAINTED INSIDE AND OUTSIDE.


SHORT ROUND HOPPER ON "S" TRAP WITH HAND HOLE AND COVER.

Code. $\qquad$ Panfilo
Each. $\$ 10.75$
Shipping weight, lbs. $\qquad$
Shipping measurement, cubic feet
$\qquad$ $33 / 4$


$$
\begin{aligned}
& \text { SHORT ROUND HOPPER ON "S" TRAP WITH } \\
& \text { ANGLE HUB VENT. }
\end{aligned}
$$

Code............................................ Pangam
Each.................................................. $\$ 10.75$
Shipping weight, lbs........................... $601 / 2$
Shipping measurement, cubic feet........ 33/4

Outside diameter of top, 13 inches. Height from flange, 17 inches. Outlet for 4 -inch cast soil pipe. Supply Coupling for $1 / 2$-inch Lead Pipe.

Distance from center of Trap outlet to center of Bowl, 11 inches.

The Eclipse Valve is double-acting and gives long and satisfactory service. It works well under any pressure from 5 to 200 pounds, without reaction, and can be regulated to give the length of flush desired by screwing the stem up or down.

+ Carried in San Francisco only.


## HOPPER VALVE CLOSETS.

WITH ROUND SELF-RAISING SEATS AND ECLIPSE DOUBLE-ACTING SEAT VALVES.

ENAMELED INSIDE AND PAINTED OUTSIDE.


TALL ROUND FLUSHING RIM HOPPER.
Code................................................. Pangases
Each............................. ................. \$11.25
Shipping weight, lbs56
Shipping measurement, cubic feet......... 3

Outside diameter of top, 19 inches. Height from flange, $161 / 2$ inches. Outlet for 4 -inch cast soil pipe.

Distance from center of outlet to face of finished wall, 14 inches.


TALL ROUND HOPPER.

Code ..................................................Pangendo
Each................................................. \$9.00
Shipping weight, lbs.......................... 41
Shipping measurement, cubic feet........ 3
Outside diameter of top, $141 / 2$ inches. Height from flange, 16 inches. Outlet for 4 -inch cast soil pipe.

Distance from center of outlet to face of finished wall, 13 inches.

$$
\text { Supply Couplings for } 1 / 2 \text {-inch Lead Pipe. }
$$

The Eclipse Valves furnished with above Hoppers are double-acting and have proved capable of long and satisfactory service. They work well under any pressure from 5 to 200 pounds without reaction and can be regulated to give the length of flush desired by screwing the stem up or down. $\dagger$ Carried in San Francisco only.

## TALL FLUSHING RIM HOPPERS.


$\dagger 203-\mathrm{C}$.

TALL ROUND FLUSHING RIM HOPPER. ENAMELED INSIDE, PAINTED OUTSIDE.
$+205-\mathrm{C}$.


TALL OVAL UNION FLUSHING RIM SHIP'S HOPPER EXTRA HEAVY. ENAMELED INSIDE AND OUTSIDE. WITH $31 / 2-\operatorname{INCH}$ FLAT ENAMELED ROLL RIM.

Code $\qquad$ Pangenet

Code.
Pangiace
Each................................................... \$5. 00
Shipping weight, lbs.
35
Shipping measurement, cubic feet $\qquad$ $31 / 4$

Outside top diameter, 15 inches. Height from flange, $15 \frac{1}{2}$ inches. Outlet for 4 -inch cast soil pipe.

Distance from center of outlet to face of finished wall, $111 / 2$ inches.

Each.
$\$ 12.20$
Shipping weight, lbs 98
Shipping measurement, cubic feet.........
Outside top measurement, $17^{3 / 4} \times 155^{1 / 2}$ inches. Height from flange, $161 / 8$ inches. Outlet for 4 -inch cast soil pipe.

Distance from center of outlet to face of finished wall, 11 inches.

205-C may be used without wooden seat and is especially adapted for use on battleships and other vessels.

## SHORT OR FRENCH PATTERN HOPPER.

ENAMELED INSIDE. PAINTED OUTSIDE. WITH SIDE ARM INLET



Height from flange to top, 8 inches; 4 -inch outlet; outside top diameter, $131 / 2$ inches.


## PHILADELPHIA HOPPER.

```
ENAMELED INSIDE. SIDE ARM.
```



Height from ${ }^{-}$flange to top, $151 / 2$ inches ;outlet for 4 -inch Cast Soil Pipe; outside top diameter, 13) inches.
Code Pangonum
Each ..... $\$ 2.75$
Shipping weight, lbs ..... 21
Shipping meas., cubic feet ..... $21 / 2$

NEW PATTERN HOPPER.

+211 (.

Height from flange to top, $1.51 / 2$ inches; outlet for 4 -inch Cast Soil Pipe; outside top diameter, $133^{1 / 4}$ inches.
Code Pangues
Each. ..... $\$ 2.75$
Shipping weight, lbs ..... 23
Shipping meas., cubic feet. ..... 3

## H. M. \& S. SIPHON CLOSET TANKS.

WITH PATENT TANK BOARDS.


Cut shows style of Nos. 90 and 95 .

Numbers.
Size of siphon, inches 90 Zinc Lined 1/1/4 $17 \times 8 \times 10$
Inside dimensions, inches
Capacity, gallons $\qquad$
Each complete $\qquad$
Shipping weight, lbs. $\qquad$
$\$ 4.95$
35
3


216-C.
Sectional view of H. M. \& S. Siphon Tanks.

| Panicful | Panicola | Paniculate |
| :---: | :---: | :---: |
| 90 Copper Lined | +95 Zinc Lined | +95 Copper Lined |
| $11 / 4$ | $11 / 4$ | $1 / 4$ |
| $17 \times 8 \times 10$ | $20 \times 9 \times 10$ | $20 \times 9 \times 10$ |
| $51 / 2$ | $71 / 2$ | $71 / 2$ |
| 5.40 | 6.35 | 6.95 |
| 35 | 49 | 49 |
| 3 | $31 / 2$ | $31 / 2$ |

NATURAL OAK. ROUND CORNERED AND MOULDED.


Cut shows style of Nos. 101 and 102.


218-C.
Sectional view showing use of Tank and Board.

| Code | Paniegas | Panificem | Panifier | Panigeris |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 101 Zinc Lined | 101 Copper Lined | 102 Zinc Lined | 2 Copper Lined |
| Size of Siphon, inches | 11/4 | $11 / 4$ | $11 / 4$ | $11 / 4$ |
| Inside dimensions, inches. | 17x8x10 | $17 \times 8 \times 10$ | 20x9x10 | $20 \times 9 \times 10$ |
| Capacity, gallons. | $51 / 2$ | $51 / 2$ | $71 / 2$ | $71 / 2$ |
| Each complete. | \$5.55 | 6.00 | 6.25 | 6.85 |
| Shipping weight, lbs............................. Shipping measurement, cubic feet........ | 36 $31 / 4$ | 36 $31 / 4$ | 49 33 3 | $\begin{gathered} 49 \\ 33 / 4 \end{gathered}$ |

The above tanks are furnished complete with all trimmings ready to set up. The Patent Tank Boards are furnished instead of brackets, enabling the plumber to quickly and securely put the tank up by nailing tank board to wall and securing tank to same by means of clamps furnished with each tank.

No. 10 Zinc is used in lining all zinc lined Tanks.
The Ball Cocks furnished are of Improved design, simple in construction, practically noiseless and suitable for either high or low pressure.

Supply and Flush Couplings are nickel-plated. Supply Tail Pieces are threaded for $3 / 8$-inch iron pipe.

+ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Stock Numbers.


## H. M. \& S. SIPHON CLOSET TANKS.

```
NATURAL OAK, ROUND CORNERED AND MOULDED FOR SIPHON JET AND WASH DOWN
                    CLOSET BOWLS.
```



219-C.
Cut shows style of No. 103 Tank. Interior construction same as 216.C.

| Code | Paniscus | Panizal |
| :---: | :---: | :---: |
| Numbers | 103 Zinc Lined | 103 Copper Lined |
| Size of Siphon, inches | 11/2 | $11 / 2$ |
| Inside dimensions, inches. | 20x9x10 | 20x9x10 |
| Capacity, gallons. | $71 / 2$ | $71 / 2$ |
| Each complete. | \$6.80 | 7.40 |
| Shipping weight, lbs.. | 51 | 51 |
| Shipping measurement, cubic feet. | 33/4 | $33 / 4$ |

One in a crate.
† ENAMELED IRON CLOSET TANKS.
ROUND CORNER. GALVANIZED GOOSE-NECK SIPHON VALVE.


These Tanks may be used with any of our Siphon, Jet or Wash Down high tank combinations.


Four in a crate.
Measurements:-Center of flush to wall, 3 inches ; center of supply to wall, 4 inches ; center of flush to center of supply, $51 / 2$ inches; supply, $3 / 8$-inch iron pipe or $5 / 8$-inch slip joint ; flush connection $11 / 2$ inch.
$\dagger$ Carried in San Francisco onlv.

## H. M. \& S. LOW DOWN CLOSET TANKS.



## Numbers 123 and I 24 Tanks.

Are Round Cornered, Hard Finished, either Natural or Golden Oak, with High Pattern Ball Cocks.

Supply and Flush Couplings are NickelPlated. Supply Tail Pieces are threaded for $3 / 8$-inch Iron Pipe. No. 10 Zinc is used in lining all Zinc-Lined Tanks.

No. 123 is equipped with Eastwood Flushing Valve.

No. 124 is equipped with Rubber Ball Flushing Valve.

For Italian or Tennessee Marble Top, add to list $\$$.

> One in a crate.

| Code | Panjab | Panjail | Panjamo | Panjelly |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 123 Zinc Lined | 123 Copper Lined | 124 Zinc Lined | 124 Copper Lined |
| Size of Flushing Valve, inches ......... | 2 | 2 | 2 | 2 |
| Inside dimensions, inches................. | 19x6x16 | 19x6x16 | 19x6x16 | 19x6x16 |
| Capacity, gallons........................... | $91 / 2$ | $91 / 2$ | $91 / 2$ | $91 / 2$ |
| Each complete. | \$12.50 | 13.25 | 11.00 | 11.75 |
| Shipping weight, lbs........................ | 4 | 45 | 4 | 44 |
| Shipping measurement, cubic feet...... | 3 | 3 | 3 | 3 |

## 224-C No. 126 Tanks.

Are Bent Quartered Oak, either Natural or Golclen, Piano Polished.
They are equipped with Eastwood Flushing Valve and High Pattern Ball Cocks.

Supply and Flush Couplings are NickelPlated. Supply Tail Pieces are threaded for $3 / 8$-inch iron pipe.

No. 10 Zinc is used in lining all ZincLined Tanks.

One in a crate.



## CLOSET SEATS.

## FOR SEAT ATTACHMENT BOWLS.


$225-\mathrm{C}$.
Cut shows No. $0201 / 2$.
NATURAL OAK VARNISH FINISH WOOD STRIP SEAT.

$227-\mathrm{C}$.
Cut shows Nos. 21 and 22.
NATURAL OAK VARNISH FINISH WOOD STRIP SEAT.
FOR ROUND HOPPERS.


Cut shows Nos. 20 and $201 / 2$. NATURAL OAK VARNISH FINISH WOOD STRIP SEAT.

2.28. ${ }^{\prime}$.

Cut shows No. 23.
NATURAL OAK VARNISH FINISH WITH BRASS NICKEL-PLATED STRAIGHT POST HINGES.

Panjiles
$+0.001 / 2$
$151 / 2 \times 173 / 4$
1
$\$ 1.65$
7
$2 / 3$

| $\begin{aligned} & \text { Pankruit } \\ & 20 \end{aligned}$ | Pannary $201 / 2$ | Pannefin $+21$ | Panneos | $\begin{gathered} \text { Pannikin } \\ \mathbf{\Omega} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| $15 \times 171 / 2$ | $15 \times 17^{1 / 2}$ | $153 / 4 \times 171 / 2$ | $16 \times 161 / 2$ | $15 \times 171 / 2$ |
| $11 / 4$ | 1 | $111 /$ | 1/1/4 | 11/4 |
| 2.00 | 1.85 | 2.00 | 2.00 | 285 |
| 11 | 11 | 11 | 11 | 11 |
| 1/12 | 11/12 | 1112 | 11/2 | 1\%12 |

One in a case.

Number 21 fits Round Porcelain Hoppers, plate 81-C. Number 22 fits Round Enameled Hoppers, plate $92-\mathrm{C}$.
*The measure of above seats is the extreme width and the length from front to nickel-plated post or bolt that secures seat to bowl.
$\dagger$ Carried in San Francisco only.

## "CROWN" NEVER SPLIT CLOSET SEATS.

THE BEST MADE.



235-C.

Ninety per cent of the Closet Seats in actual use open up in the joints inside of two years, and when placed in very damp or hot places in much less time.

The reason is that all Closet Seats are exposed to dampness and heat which makes the wood either swell or shrink, and seats put together with glued joints only cannot under above conditions help coming apart.

Dampness and heat do not effect "Never Split Seats." Notice construction in cut above.
Glued and Doweled joints same as on all other seats; besides one iron bolt in each joint.

## †"CROWN" NEVER SPLIT CLOSET SEATS.

See description and sectional cut on page 98.


236-C.
No. 30 Natural Oak Seat Varnish Finish, with Cast Brass Nickel-Plated Straight Post Hinges.

$238 . C^{\circ}$.
No. 32 Natural Oak Saddle Seat Piano Finish with Extra Heavy Cast Brass NickelPlated Offset Hinges.

237.C.

No. 31 Natural Oak Seat Varnish Finish, with Extra Heavy Cast Brass Nickel-Plated Straight Post Hinges.


239 - C.
No. 33 Natural Oak Saddle Seat Piano Finish, with Extra Heavy Cast Brass NickelPlated Offset Hinges.

| Code. | Pannum |
| :---: | :---: |
| Numbers. | 30 |
| * Measurement of Seat, inches............ | $15 \times 17$ |
| Thickness of Seat, inches. | $11 / 4$ |
| Each. | \$3.30 |
| Shipping weight, lbs.. | 12 |
| Shipping measurement, cubic feet...... | $3 / 4$ |


| Panocha | Panojas | Panoleria |
| :---: | :---: | :---: |
| $\mathbf{3 1}$ | $\mathbf{3 2}$ | $\mathbf{3 3}$ |
| $15 \times 171 / 4$ | $14^{1 / 4 \times 17} 1 / 2$ | $14^{1 / 4 \times 171 / 2}$ |
| $11 / 4$ | $11 / 2$ | $11 / 2$ |
| 3.85 | 5.45 | 6.00 |
| 12 | $111 / 2$ | 11 |
| $3 / 4$ | $3 / 4$ | $3 / 4$ |

One in a crate.

## $\dagger$ Carried in San Francisco only.

* The measure of above seats is the extreme width and the length from front to Nickel-Plated Post that secures seat to bowl.

In Orders and Specifications give Plate Numbers and Stock Numbers.
L. of C.

## CLOSET SEATS.



Cut shows Nos. 040 and $0401 / 2$. NATURAL OAK. VARNISH FINISH SEAT.

247. 1.

Cut shows Nos. 41 and $41 / 2$.
NATURAL OAK. VARNISH FINISH SEAT.


HOPPERS WITHOUT SEAT LUGS.

$246 . c^{\prime}$.
Cut shows No. $401 / 2$.
NATURAL OAK. VARNISH FINISH SEAT.


248-c.
Cut shows No. $421 / 2$.
NATURAL OAK. VARNISH FINISH SEAT.

| Panopside | Panoptes | Panorama | Panorpide |
| :---: | :---: | :---: | :---: |
| $\mathbf{4 0 1 / 2}$ | $\dagger \mathbf{4 1}$ | $\mathbf{4 1} 1 / 2$ | $\dagger \mathbf{4 2} 1 / 2$ |
| 1 | $11 / 4$ | 1 | 1 |
| 1.95 | 2.40 | 2.30 | 3.05 |
| 14 | $221 / 2$ | $191 / 2$ | $191 / 2$ |
| 1 | $11 / 3$ | $11 / 3$ | $11 / 3$ |



249-1.
This diagram gives the correct measurements for setting oval or round bowls for above seats.
$\dagger$ Carried in San Francisco onlv.

## CLOSET FLUSH AND SUPPLY PIPES.



## ANGLE SLIP JOINT CLOSET SUPPLIES.

```
BRASS NICKEL-PLATED
```


$\dagger$ 265-C.

WHEEL HANDLE ANGLE SLIP JOINT CLOSET SUPPLY


266 (.

CROSS HANDLE ANGLE SLIP JOINT CLOSET SUPPLY.
Code........................................... Pantable
Each.................................................. $\$ 1.40$

Code. Pantacles

Each............................................... $\$ 1.40$
Weight each, lbs

Weight each, lbs
$\$ 1.40$
1

The valves furnished for above supplies have ground seat; they have inside $1 / 2$-inch iron pipe thread for inlet and $\% / 16$-inch slip joint connection outlet. The collar on tube fits the supply coupling nut on all of our tanks and is $7 / 8$-inch outside diameter. The nipple to wall is nickel-plated brass, $1 / 2$-inch (iron pipe size) and + inches long.

This supply will rough in at 9 inches from center of inlet to bottom of tank.

+ Carried in San Francisco only.


## SLIP JOINT SUPPLY VALVES.

NSIDE IRON PIPE THREADS ONE END AND SLIP JOINT CONNECTION ON THE OTHER


Wheel Handle NickelPlated Straight Slip Joint Supply Valve.

Finished Nickel-Plated Angle Slip Joint Supply Valves, 270-C and 27I-C.


## Rough Nickel-Plated Angle Slip Joint Supply Valves, 269-C Not Shown.

Code
Panteus. $1 / 2$-inch Iron Pipe by $1 / 2$-inch Slip Joint, Cross Handle. Weight $3_{4} 1 \mathrm{lb}$. $\$ 0.58$

Finished Nickel-Plated Straight Slip Joint Supply Valves, 272-C and 273-C.


One-half dozen in a package.

+ Carried in San Francisco only.


## ANGLE VALVES FOR CLOSET SUPPLIES.

ALL IRON PIPE THREADS.

Code Finished Nickel-Plated Angle Valves, 274-C and 275-C.

| Pantiner........ $3 / 8$-inch |  | Plated Cross |  | Handle | Angl | Valve | Weight, 3/4 |  | $\begin{array}{r} \text { Each } \\ \$ 2.40 \\ 2.40 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pantoffel........3/8 " | " | " | IVheel | " | " | " | " | 3/4 |  |
| $\dagger$ Pantogame...1/2 ${ }^{1} 3 / 8$ | inch " | " | Cross | " | " | " | " | 3/4 | 2.65 |
| $\dagger$ Pantoire..... $1 / 2 \times 3 / 8$ | " " | " | Wheel | " | " | " | " | 3/4 | 2.65 |
| Pantology ..... ${ }^{1 / 2}$ | . 6 | " | Cross | " | " | " | " | 1 | 2.65 |
| Pantopoda..... ${ }^{1 / 2}$ | " | " | Wheel | " | " | " | " | 3/4 | 2.65 |

## Rough Nickel-Plated Angle Valves, 276-C.

Pantotele....... $3 / 8$-inch Rough Nickel-Plated, Angle Valve. Weight, $3 / 4 / \mathrm{lb} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . . . . . . . . . . . . . . . .$.

Pantuflo........1⁄2 " " " " " 0 "......................... 1.25
Rough Angle Valves, 277-C.
Panunto......... $3 / 8$-inch Rough Angle Valve. Weight, 3/4 lb................................................ . 75
Panurgy....... $1 / 2 \mathrm{x} 3 / 8$ " " " $3 / 4$ ".......... .................................. 1.00
Panvisch....... ${ }^{1 / 2}$ " " " " 1 "................................................. 1.00

Six in a package.
$\dagger$ Carried in San Francisco only.

## CLOSET FLUSH PIPE CONNECTIONS.


205. $\mathbf{C}$.

286.6

Nickel-Plated 45
Flush Pipe
Elbow.

287.C.

Nickel-Plated 90 Flush Pipe Elbow.


2ss.C.
Nickel-Plated Slip Joint Nut with Rubber Washer and Nickel-Plated Flange.



* 291-C.

Superior Rubber Elbow.


292-C.
Rickett's Rubber Elbow

$293-{ }^{\circ}$.
Rickett's Straight Rubber Connection.

$2 \times 2$-inch Superior, one-half dozen; others, one dozen in a box.

* Superior Connections have Nickel-Plated Brass Nuts. They are the longest Elbows on the market and may be easily shortened by simply removing the brass shell S and cutting off the rubber to any length desired. The soft rubber ring T forms a movable flange.

Rickett's Connections have Rough Brass Nuts. If too long, cut off in line of Rear Flange and slip nut over.
$\dagger$ Carried in San Francisco only:
In Orders and Specifications give Plate Numbers and Sizes.
NICKEL-PLATED POST. NICKEL-PLATED STRAPS.

$300-\mathrm{C}$.
Nickel-I'lated Adjustable Flush and Supply Pipe Posts.


301 - ${ }^{(1 .}$

$302-{ }^{\prime}$.

## Nickel-Plated Flush and Supply Pipe Posts, 300-C.

Code ..... Per dozen.
$\dagger$ Papasso.... ${ }^{1}+$-inch Nickel-Plated Adjustable Flush Pipe Post. From wall to center of pipe, 4 inches. Weight per dozen, 1 lb ..... $\$ 4.00$
Papaute...... $1 / 2$-inch Nickel-Plated Adjustable Flush Pipe Post. From wall to center of pipe, 4 inches. Weight per dozen, $11 / 2 \mathrm{lbs}$ ..... 4.56
Papayer...... $5 / 8$-inch Tubing or $3 / 8$-inch Iron Pipe, Nickel-Plated Adjustable Supply Pipe Post. From wall to center of pipe, 4 inches. Weight per dozen, $11 / 2 \mathrm{lbs}$. ..... 3.36
Nickel-Plated Flush Pipe Straps with Bumper, 301-C.
Papegot..... $1^{11}+$-inch Nickel-Plated Flush Pipe Strap with Bumper. Weight per dozen, 1/2 1 b ..... 1.80
Nickel-Plated Flush and Supply Pipe Straps, 302-C.
Papelard $\ldots . .1^{1}+$-inch Nickel-Plated Flush-Pipe Strap Plain. W'eight per dozen, $1 / 2 \mathrm{lb}$. ..... 58
 ..... 72
Papelona.....5/8 " Tubing or $3 / 8$-inch Iron Pipe Nickel-Plated Supply Pipe Straps. Weight per dozen, $1 / 8 \mathrm{lbs}$. ..... 50

3(0)-C' has a Nickel-Plated Socket that is secured to the wall by an ordinary screw which passes through the center of the socket; the post sets into the socket and is held in place by a small set screw. The post is made of Nickel-Plated Tubing and may be cut to the desired length.

301- (' and 302-C are of Stamped Brass Nickel Plated.

## RUBBER GASKET. MARBLE SLAB. BRASS FLANGE.


$305-\mathrm{C}$.
Kubber Floor Flange
( asket.


306-1.
Marble Floor Slab.


307-c.
Brass Floor Flange.
Corle ................ Papenmut
Each ................ $\$ 0.16$
Code..... ........................................ Paperiua Price on application.

Code.. $\qquad$ Papesco Weixhtperdure Ibs $1 / 2$ Weight perdo...lbs. $11 / 2$ Weight per sq. ft., $11 / 2$ inches thick, lbs.. $221 / 2$ Weight each, Ib.......... $3 / 4$ Each .................. $\$ 0.50$ $\dagger$ Carried in San Francisoo only.

## NICKEL-PLATED BOLTS AND SCREWS.



Brass Floor Flange Bolts with Nickel-Plated Nut, $11 / 2$ inches.

Loose Head Screws for Closet
Bases with Nickel-Plated
Heads. $21 / 2$ inches.

| Code.................. Papilles |  |  |
| :--- | :---: | :---: |
|  | Papiron <br> Brass |  |
| Per dozen........... $\$ 1.00$ | 2.50 |  |
| WYt. per gro., lbs.. | $57 / 8$ | 5 |



Nickel-Plated Round Head
Wood Screws 2-inch No. 12 .
Code ............................Papafian
Per dozen.................... $\$ 1.00$
lVeight per gross, lbs. ... $\quad 7$
One-half gross in a package.

## NICKEL-PLATED CLOSET WASHERS.

| Code. | Paplepel | Code......................... Papmeat | Code....................... Paponge |
| :---: | :---: | :---: | :---: |
| Per dozen | \$0.25 | Per dozen.................. \$0.30 | Per dozen.................. $\$ 0.40$ |
| W'eight per gro., lb....... One gross in a package | $3 \cdot 4$ | W'eight per gro., ibs..... $1 \frac{1 / 8}{8}$ One gross in a package. | Weight per 100 , lbs...... $17 / 3$ One hundred in a package. |

$\dagger$ Carried in San Francisco only.


320 - .
Bent Coupling and Nut for Closet Bowls.


321-C.
Straight Coupling and Nut for Closet Bowls.

| Code. | Papouche | Papoula | Pappamus |
| :---: | :---: | :---: | :---: |
| Size, inches........... | 11/4 | $11 / 2$ | 2 |
| Each. | \$0.30 | . 40 | . 60 |
| Weight each, lb...... | 1/4 | 3/8 | $3 / 4$ |



322-C.
Nickel-Plated Brass Flush Pipe Collar
Threaded for 1 -inch Iron Pipe.

|  | Per dozen. |  |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |


$325-\mathrm{C}$.
Canfield Rubber
Coupling.
Code
Pappel

Per dozen.......................................... \$1.00
W'eight per doz., lb.
1/2
One dozen in a package.

| Code............ Pappeux | Pappicht |  |
| :--- | :---: | :---: |
| Size, inches.... | $\mathbf{1} 1 / 4$ | $\mathbf{2}$ |
| Per dozen $\ldots .$. | $\$ 6.00$ | 12.00 |

Wt. per doz. lbs... $6 \quad 10$
One dozen in a box.
$\dagger$ 328-C.
Hopper and Trap

*Superior Closet Repairer.

Closet Clamp.

Code Pappoose
Per dozen................... \$3.00
Weight per doz., lbs..... 2
13/4 inches between jaws.


Copper Closet Pan.
Tinned Inside. 9 -in. Diam.

* The Superior Closet Repairer has no screws, nuts, bolts or other loose parts to get lost or to take time in adjusting. No cross pieces to impede the flow of water. A perfectly free water-way and a water-tight joint.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.


## CLOSET TANK PULLS.


$\dagger$ 350. C .
Glass Tank Ball and Stem 7/32 Rod No. 24 threads.

$351-\mathrm{C}$.
Zinc Tank Ball with Socket threaded 7/32 No. 24 .

$352-\mathrm{C}$.
Corrugated Copper Tank Ball with Socket threaded 7/32 No. 24.
Code................................................. ........................

Per dozen........................................................................... $\$ 10.00$
Paradiste
Glass

| Paradoxa | Paradrome <br> Zinc |
| :---: | :---: |
| 5 | 5 |
| 4.50 | 5.50 |
| $33 / 4$ | $31 / 4$ |

Weight per dozen, lbs.
15
$33 / 4$
31/4
$\dagger$ Carried in San Francisco only.

## PARTS FOR CLOSET TANKS.


$360 \cdot{ }^{1}$.
Galvanized Gooseneck Siphon.


361-C.
Brass Siphon Seat.

$36 \mathbf{~ C}$ C.
Nickel-Plated Flush Nut and Tail Piece.

| Code.................Parafang | Paraferna |  |
| :--- | :---: | :---: |
| Size, inches........ | $\mathbf{1} / 4$ | $\mathbf{1} 1 / 2$ |
| Each................ | $\$ 1.50$ | 2.00 |
| Weight each, Ibs.. | $4^{1} / 4$ | $51 / 4$ |

363-C.
Rubber Siphon Ring.

$\qquad$ Size, inches ............
Per dozen. $\qquad$ Paraf
$1^{1 / 4}$ $1^{1 / 4}$ $\$ 2.40$
Weight per doz., lbs.


Code ................. Paraffin Paraffo
Size, inches........ 11/4 $11 / 2$

Each................. \$1.00 1.50 Each................ \$0.50 .is
Weight each, lbs.. $1 \quad 11 / 4 \quad$ Weight each, lb.. $3 / 8 \quad 1 / 2$


366-1.
Compound Lever for Ball Cock.


364-C.
Cast Iron Tank Cross Bar.

$365-\mathrm{C}$.
Cast Iron Tank Lever.

| Code................ Parageau | Code................. Paragenic |  |
| :--- | :--- | :--- |
| Each ............... $\$ 0.40$ | Each ................ $\$ 0.50$ |  |
| Weight each, lbs.. | $1 / 2$ | Weight each, lbs.. |
|  | $5 / 8$ |  |

 Nickel-Plated Bottom Supply Nut and Tail Piece. $3 / 8$-inch Iron Pipe Thread.

Code............. Paraglace
Each........... $\$ 0.50$

Cocle. $\qquad$ Paragram
Each............. $\$ 0.50$


368-C.
Nickel-Plated Supply
Lock-Nut.

Code $\qquad$ Parajour
Each............. $\$ 0.20$

Conde $\qquad$ Paralela

Each.


369 - C .
Brass Ball Cock Plunger with Cup Leather and Cushion Seat.
$\$ 0.8 .5$

$381 . \mathrm{C}^{\prime}$.
Cup Leather for Ball Cock.
Brass Float Stem. $7 / 32$ inch. No. 14 threads. $71 / 2$ inches long.
Code................... . ..... Paralipse
Code
Each

Paralizo
$\$ 0.10$

## BALL COCKS FOR CLOSET TANKS.



38: $\mathbf{~ C .}$
Compound Lever Ball Cock. Bottom Supply. Tail Piece threaded $3 / 8$ Iron Pipe. Lever Socket threaded 7/32 inch No. 14.


38t-C'.
Improved Dale Ball Cock. Bottom Supply. Tail Piece threaded $3 / 8$-inch Iron Pipe. Lever Socket threaded 7/32 inch No. 14.

$\dagger$ * 38.5. ${ }^{\text {. }}$.
Foster Patent Ball Cock. Bottom Supply.
Threaded for $3 / 4$-inch Iron Pipe with Nickel-Plated Ground Seat Coupling Nut and Tail Piece threaded for $3 / 8$-inch Iron Pipe.
 One in a box.


Foster Patent Ball Cock. Top Supply.
Threaded for $3 / 4$-inch Iron Pipe with Ground Seat Coupling Nut and Tail Piece threaded for $3 / 8$-inch Iron Pipe.


One in a box.

* 385-C, 386-C and $\mathbf{3 8 7} \mathbf{- 1}$ are to be used with a 4 -inch ball.
$\dagger$ Carried in San Francisco only.


## SEAT BOLTS.

## NICKEL-PLATED SEAT HINGES.


$390-\mathrm{C}$.
Nickel-Plated Bolts and Washers for Wood Strip Closet Seats.


391-C.
Nickel-Plated Double Hinge for Wood Strip Closet Seats.
ode
Parapeg
Number
20
$\$ 1.20$
Per pair
$\qquad$

$$
\$ 1.20
$$

$$
1
$$

$\dagger$ †99.1.
Nickel-Plated Direct Post Hinge for Closet Seats.

Code
Paraphero
Number 23


Per pair.

Code.
Parangue
Per pair.
$\$ 0.75$
$\qquad$

HINGE RUBBERS.


RUBBER BUMPERS.

[^3]
## SECTION 2.

MARBLE, SLATE AND PORCELAIN URINAL STALLS,
CAST IRON ENAMELED PUBLIC URINALS,
VITREOUS CHINA AND ENAMELED INDIVIDUAL URINALS, URINAL STALL TRIMMINGS, ETC.


Holbrook, Merrill \& Stetson,

INCORPORATED.

URINALS, URINAL STALLS, ETC.
Our Marble and Slate Stalls are made of selected stock, and every fixture is properly set and fitted before shipment is made.

All of our goods are of substantial quality and high finish.
In ordering goods from this section by telegraph, it is only necessary to use the code word over or opposite the number or size of the article wanted preceded by words from code in front of this book.

Example: Crogdal one paredros.
Translation: Ship via cheapest route one three-part Italian Marble Urinal Stall, plate four hundred and twenty-three $C$.

## "FLUSHOMETER" SIPHON JET URINAL.

## KENNEY'S PATENT.



415-C.
Vitreous China Siphon Jet Urinal with outlet to wall and Nickel-Plated Flushometer.
No. 16 Flushometer, for pressures under 6 pounds or where tank is from 6 feet to 12 feet above Urinal. No. $161 / 2$ Flushometer, for pressures 6 to 15 pounds or where tank is from 12 to 30 feet above Urinal.


Urinal can be furnished with bottom outlet, nickel-plated, 2 -inch pipe to floor, at same price.

## Roughing-in Measurements:

Distance from floor to center of Urinal Waste, 18 inches; from center of Urinal Waste to center of Flushometer inlet, $25 \frac{1}{2}$ inches; inlet connection, 1 -inch iron pipe; outlet connection, 2 -inch iron pipe.

See pages 3, 4, 5, 6 for description of Flushometer.

## "FLUSHOMETER" SIPHON JET URINALS.

KENNEY'S PATENT.


416 - ${ }^{\prime}$.

Three Stall Italian Marble Urinal with $7 / 8$-inch Italian Marble Ends and Partitions polished on both sides; $7 / 8$-inch Italian Marble Back and Top Cap polished on one side; three Nickel-Plated Flushometers; three Vitreous China Siphon Jet Urinals with Brass Wall Flange and Bolts; NickelPlated Brass Legs for Partitions; all necessary Bolts, Screws and Clamps.

## Dimensions:

Height, 5 feet; center to center of partitions, 2 feet; depth of partitions, 20 inches; depth of ends, 26 inches; leg, 12 inches.

| Code for Urinals with Italian Marble Stall Number of Stalls. | Paratopie 1 | Paratopoid | Paratopole 3 | Paratopud | Paratupult 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Complete as described. | \$111.10 | 192.80 | 270.80 | 352.50 | 434.20 |
| Shipping weight, complete, lbs........... | 574 | 921 | 1268 | 1615 | 1962 |

Price for above Stalls in Temessee Marble same as for Italian Marble.
Can turnish any number of Stalls as above described; and the height and depth of Stalls may be varied to suit conditions. Floor Slabs can also be furnished. Prices on application.
See page 115 for Roughing-in Measurements; see pages $3,4,5,6$ for description of Flushometer.
In ordering always state whether pressure is 10 pounds or over.
Boxing and cartage will be charged at cost.

## AUTOMATIC SIPHON JET URINALS.


418.C.

Three Stall Italian Marble Urinal, with $7 / 8$-inch Italian Marble Ends and Partitions polished on both sides; $7 / 8$-inch Italian Marble Back and Top Cap polished on one side, and $11 / 2$-inch Counter Sunk Italian Marble Base. Nickel-Plated Brass Clamps and Bolts; Nickel-Plated Inlet and Outlet Connections; 3 Porcelain Siphon Jet Urinals; Nickel-Plated Brass Legs for Partitions; Oak Automatic Flushing Tank, with Patent Tank Board and Nickel-Plated Flush Pipe.

Waste Plugs or Strainers furnished at extra cost.

## Dimensions:

Height, 5 feet; center to center of partitions, 2 feet; depth of partitions, 20 inches; depth of ends, 26 inches; base, 24 inches wide; leg, 12 inches.

| Cod | Paraturo | Paravail | nt | Parboil | Parcament | Parcebat |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code for Slat | Parcelle | Parcendi | Parchazo | Parching | Parcial | Parcita |
| Number of Stalls | 1 | 2 | 3 | 4 | J | 6 |
| Marble complete as described | \$123.00 | 219.56 | 309.18 | 401.14 | +94.60 | 586. 56 |
| Slate complete as described | 110.38 | 194.00 | 275.06 | 359.12 | +44.68 | 528.74 |
| Shipping weight complete, lbs | 70.5 | 1130 | 1557 | 2082 | 2415 | 2840 |
| If without Tank and Flush Pipe, deduct | \$9.70 | 11.00 | 13.20 | 14.90 | 18.10 | 19.80 |

Price for above Stalls in Tennessee Marble same as for Italian Marble.
If with Polished Brass Clamps, Bolts, Connections, Legs and Flush Pipe, deduct for each Stall \$.... Boxing and cartage will be charged at cost.
Can furnish any number of stalls as above described; and the height and depth of stalls may be varied to suit conditions.

## URINAL STALLS.


421.c.

Two-Stall Italian Marble Urinal with $7 / 8$-inch Italian Marble Ends and Partition, polished on both sides, $7 / 8$-inch Italian Marble Back polished one side, and $11 / 2$-inch Counter Sunk Base; NickelPlated Brass Clamps and Bolts; Nickel-Plated Brass Inlet Connections; two No. 2 Flat Back Porcelain Lipped Urinals; Nickel-Plated Brass Urinal Traps; Nickel-Plated Brass Leg for Partition; two-gallon Oak Automatic Flushing Tank, with Patent Tank Board and Nickel-Plated Brass Flush Pipes to Urinal.

Waste Plugs or Strainers furnished at extra cost.
Dimensions :
Height, 5 feet; center to center of partitions, 2 feet; depth, 20 inches; height of leg, 12 inches.
$\left.\begin{array}{llcccccc}\text { Code for Marble } \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots\end{array}\right)$

Price for above Stalls in Tennessee Marble same as for Italian Marble.
If with Polished Brass Clamps, Bolts, Connections, Traps, Legs and Pipes, deduct for each Stall $\$ 1.50$. Boxing and cartage will be charged at cost.
Can furnish any number of stalls as above described; and the height and depth of stalls may be varied to suit conditions. Prices on application.

## URINAL STALLS.

## WITH DOHERTY SELF-CLOSING URINAL COCKS.



428-C.
Three Stall Italian Marble Urinal with $7 / 8$-inch Italian Marble Ends and Partitions polished on both sides; $7 / 8$-inch Italian Marble Back polished one side and $11 / 2$-inch Counter Sunk Italian Marble Base; Nickel-Plated Brass Clamps and Bolts; Nickel-Plated Top Railing and Legs with Bolts; three No. 2 Flat Back Porcelain Lipped Urinals, with Nickel-Plated Doherty Self-Closing Urinal Cocks and Connections and Nickel-Plated Urinal Traps.

Waste Plugs or Strainers furnished at extra cost.

## Dimensions:

Height without railing, 5 feet; with railing, 6 feet; center to center of partitions, 2 feet; depth, 20 inches; height of leg, 12 inches; base, 2 feet wide.


Price for above Stalls in Tennessee Marble same as for Italian.
If with Polished Brass Trimmings instead of Nickel-Plated, deduct for each Stall \$1.90.
Boxing and cartage will be charged at cost.
Can furnish any number of Stalls as above described, and the height and depth of Stalls may be varied to suit conditions. Prices on application.

## URINAL STALLS.

WITH AUTOMATIC FLUSHING TANKS.

425.C.

Three-Stall Slate Urinal with Cast Iron Galvanized Gutter, Strainer and Outlet; Polished Brass Clamps and Bolts; Perforated Brass Wash Down Pipe; two gallon Oak Automatic Flushing Tank with Patent Tank Board and Polished Brass Flush Pipe.

## Dimensions:

Height, 5 feet; center to center of partitions, 24 inches; depth, 20 inches; base, 24 inches wide Ends, backs and partitions are $7 / 8$ inch thick; base is $11 / 2$ inches thick.

| C | Parentage | Parental | Parentesi | Parenthese | Parentless | Parâit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code for Marble. | Parfilage | Parfondon | Parfum | Pargasite | Pargeter | Pargolo |
| Number of Stalls | 1 | 2 | 3 | 4 | - | 6 |
| Price for Slate as described. | \$ 98.40 | 151.50 | 218.10 | 271.90 | 327.20 | 359.80 |
| Price for Marble as describe | 114.10 | 181.20 | 254.70 | 322.50 | 391.80 | 468.40 |
| Shipping weight, | 565 | 1070 | 1377 | 1782 | 2195 | 2600 |

Price for above Stalls in Tennessee Marble same as for Italian.
Can furnish any number of Stalls as above described, and the height and depth of Stalls may be varied to suit conditions.
With Nickel-Plated Brass Trimmings, add for each Stall $\$ 1.20$.
Above Stalls can be furnished either right or left hand outlet. Left hand outlet, as shown in cut, is always sent unless otherwise specified.
Boxing and cartage will be charged at cost.

## URINAL STALLS.

WITH WASH DOWN PIPE.


427-(.

Three Stall Slate Urinal with Cast Iron Galvanized Gutter, Strainer and Outlet Connection; Polished Brass Clamps and Bolts; Perforated Brass Wash Down Pipe with Finished Brass Compression Loose Key Stop.

## Dimensions:

Height, 5 feet; center to center of̣ partitions, 2 feet; depth, 20 inches; base, 24 inches wide. Ends, backs and partitions, $7 / 8$ inch thick; base, $11 / 2$ inches thick.

| Cod | Parhippi | Pariade | Pariambo | Pariamus | Parianos | Parjura | Parjurons |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code for Marble | Parkart | Parladill | Parladora | Parlagio | Parlantin | Parlassi | Parlatura |
| Number of Stalls | 1 | 2 | 3 | + | 5 | 6 | 7 |
| Price for Slate as described. | 91.20 | 144.40 | 210.10 | 263.30 | 316.50 | 378.50 | 431.70 |
| Price for Marble as described.. | 106.90 | 174.10 | 246.70 | 313.90 | 381.10 | 457.10 | 524.30 |
| Shipping weight, lbs. | 540 | 945 | 1350 | 1755 | 2160 | 2565 | 2970 |

These Stalls can be furnished in any length, height and depth; single, as shown, to go against the wall: or double with back in center having Stall on each side and Tank suspended from ceiling.
Price for above in Tennessee Marble, same as for Italian Marble.
If with Nickel-Plated Brass Trimmings for each Stall, add $\$ 1.00$.
Can furnish any number of Stalls as above described, and the height and depth of Stalls may be varied to suit conditions. Prices on application.
Boxing and cartage will be charged at cost.
Above Stalls can be furnished either right or left hand outlet; right hand outlet as shown in cut is always sent unless otherwise specified.

## URINAL STALLS.

## FOR SCHOOLS AND PUBLIC BUILDINGS. WITH WASH DOWN PIPE.



429-1.

Slate Urinal Stall with Cast Iron Galvanized Gutter, Strainer and Outlet Connection; Brass Clamps and Bolts; Perforated Brass Wash Down Pipe, with Finished Brass Compression Loose Key Stop.

## Dimensions:

Height, 5 feet; depth, 20 inches; Back and Ends are of $7 / 8$-inch Slate or Marble; the Base is $11 / 2$ inches thick.

| Code for Slate | ent | Parleront | Parleurs | Parlevole | Parlotean |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code for Marble | Parmacell | Parmain | Parmatos | Parmenon | Parmesan |
| Length, feet. | 4 | 6 | 8 | 10 | 12 |
| Price for Slate complete, as described,... | \$ 96.30 | 135.50 | 166.70 | 197.90 | 237.90 |
| Price for Marble complete, as described.. | 121.10 | 164.10 | 198.95 | 233.90 | 277.60 |
| Shipping weight, lbs.. | 742 | 976 | 1200 | 1434 | 1668 |

This Stall can be furnished in any length, height and depth. Single, as shown, to go against the wall, or double with back in center and Stall on each side.

Prices for above in Tennessee Marble same as for Italian Marble.
Boxing and cartage will be charged at cost.
Can furnish any length of Stall as above described, and the height and depth may be varied to suit conditions. Prices on application.

Can be furnished either right or left hand outlet; left hand outlet, as shown, will always be sent unless otherwise specified.

## GLASS URINAL STALLS.

WITH WASH DOWN PIPE.



## 431-C.

Three Stall Rough Rolled Glass Urinal; the Back, Ends and Partitions are of 1-inch Rough Rolled Glass, all exposed edges are polished; Nickel-Plated Brass Clamps and Bolts; Nickel-Plated Brass, Perforated Wash Down Pipe with Nickel-Plated Compression Loose Key Stop; Cast Iron Galvanized Gutter with Straight Outlet Connection.

## Dimensions:

Height, 5 feet; width, center to center of partitions, 2 feet; depth, 20 inches.

| Code Number of Stalls. | $\begin{aligned} & \text { Parnassi } \\ & \mathbf{1} \end{aligned}$ | Parnopes 2 | Parobsis 3 | Parochete 4 | $\begin{aligned} & \text { Parochian } \\ & 5 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Price as described | \$121.20 | 194.40 | 276.40 | 349.60 | 422.80 |
| Shipping weight, lbs......................... | 630 | 1085 | 1540 | 1995 | 2450 |

The bottom parts of Ends and Partitions are made so that the Glass Base can be pitched toward the
Gutter. Glass being non-absorbent is well adapted for Urinal Stalls.
We can furnish Glass Urinal Stalls fitted up with Earthenware Urinals, or in any other manner or size desired.
Prices on application.
Above Stalls can be furnished either right or left hand outlet; left hand outlet, as shown in cut, will always be sent unless otherwise specified.
Boxing and cartage will be charged at cost.

## SPEAKMAN'S VENTILATED URINALS.

## FOR SCHOOLS AND PUBLIC BUILDINGS.



433-C.

Single Partition to set against wall.


434-c.
Double Partition to set in room and away from wall.

Sectional views of Ventilated Urinals, 435-C and 436-C, showing details of Flushing Cistern, Ventilating Duct and Waste Trough.

This is absolutely a sanitary fixture; the water for flushing the urinal is fed into the slate cisterns through the pet cocks, which economizes the consumption of water to the last degree.

The water overflows from the cisterns through the grooves at upper edge of back and forms a perfect and continuous sheet on the urinal backs and falls into the slate waste trough below. By using the standing overflow in the slate waste trough, a body of water 2 inches deep is carried in it, and so dilutes the urine that the whole fixture is kept free from odor.

The urinal is efficiently ventilated by having an air duct between the backs, as shown in the double pattern, and between the back and wall in the single pattern, and a draught can be created by placing a gas jet in the copper flue attached at the end, or the fixture can be placed on a fan system, or connected with a hot air flue or chimney. All odors are drawn up from the waste trough, then pass between the backs and out into the flue; thus ventilating not only the urinal, but the entire room in which it is located.

When a gas jet is placed in the copper flue, a very small flame only is required to create the necessary draught.

## SPEAKMAN'S VENTILATED URINALS.

FOR SCHOOLS AND PUBLIC BUILDINGS.

435.C.

Ventilated Slate Urinal with Partitions, Back, Countersunk Floor Slabs, Slate Flushing Cisterns, Solid Slate Waste Trough extending under Slate Cover at end and provided with 3-inch Polished Brass Removable Standing Overflow and additional End Overflow; Polished and Nickel-Plated Partition Caps and Supply Pipe Holders; 11/4-inch Galvanized Iron Supply Pipe with Brass Pet Cocks with Special Heads (so that they cannot be tampered with); Brass Supporting Legs, Heavy Iron Cistern Supports and Bolts; no Knees or Bolts required in the setting of Partitions, therefore lessening the number of places to hold filth.

| Code........................ Parodiam | Parodical | Parody | Paroffia | Parpado | Parpalla | Parpallota | Parpatana |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Stalls........ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| Complete, as described.. $\$ 176.00$ | 235.00 | 293.00 | 352.00 | 411.00 | 469.00 | 528.00 | 581.00 |  |
| Shipping weight, lbs..... | 1230 | 1595 | 1960 | $\mathbf{2 3 2 5}$ | 2690 | 3055 | 3420 | 3785 |

Copper V'ent Flue and Main Supply Valve not included in above prices.
In ordering, state whether right or left hand outlet is required. We invariably send Urinal with outlet on right hand side, as shown in $43 \bar{y}-\mathrm{C}$, unless otherwise specified.

## Dimensions:

Height, 5 feet; width, 21 inches between partitions; depth, end partitions, $205 / 8$ inches; middle partitions, 14 inches; width of floor slabs, 15 inches; distance from front of base to wall, $285 / 8$ inches; back, 1 inch thick; partitions, 1 inch thick; floor slab, 2 inches thick; slate waste trough, 12 inches wide inside and 4 inches deep inside.

For further details see page 124 .

## SPEAKMAN'S DOUBLE VENTILATED URINALS.

## FOR SCHOOLS AND PUBLIC BUILDINGS.



436-C.

Double Ventilated Slate Urinal with Partitions, Backs, Countersunk Floor Slabs, Slate Flushing Cisterns, Slate Waste Trough extending under Slate Cover at end, and provided with 3 -inch Polished Brass Removable Standing Overflow and additional End Overflow; Galvanized Iron Pedestals for supporting the Backs; Polished and Nickel-Plated Brass Partition Caps and Supply Pipe Holders; 2-inch Galvanized Iron Supply Pipe with Brass Pet Cocks with Special Heads (so that they cannot be tampered with); no Knees or Bolts required in the setting of Partitions, therefore lessening the number of places to hold filth.

| Code..................................arqueda | Parquet | Parrafo | Parrains | Parrudo | Parsemer | Parsimus | Parsisset |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Double Stalls... | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| Complete, as described..... $\$ 370.00$ | 423.00 | 528.00 | 633.00 | 740.00 | 839.00 | 939.00 | 1027.00 |  |
| Shipping weight, lbs.......... 1730 | 2460 | 3190 | 3920 | 4650 | 5380 | 6110 | 6840 |  |

Copper Vent Flue and Main Supply Valve not included in above prices.
In ordering, state whether right or left hand outlet is required. We invariably send Urinal with outlet on right hand side, as shown in $436-\mathrm{C}$, unless otherwise specified.

## Dimensions:

Height, 5 feet; width, 21 inches between partitions; depth, end partitions, $35 \frac{1}{4}$ inches; middle partitions, 14 inches; width of floor slabs, 15 inches; $u$ idth over all, $493 / 4$ inches; back, 1 inch thick; partition $\sim 1$ inch thick; floor slabs, 2 inches thick; width of gutter, $20 \frac{1}{4}$ inches inside; depth, 4 inches inside.

For further details see page 124 .

## IDEAL PORCELAIN URINALS.



These Urinals may be set on floor, in tile, incased in Marble or Slate Stalls, as shown in 441-C above. Each Urinal is made with Local Vent opening, 2 x 4 inches at top as shown.

## Code.

Urinal only ..... $\$ 67.00$
Shipping weight, lbs ..... 450
Shipping measurement, cubic feet ..... 28

For Nickel-Plated Flush Connection and Spreader, add $\$ 14.00$.
For Nickel-Plated Strainer and Floor Flange, add $\$ 5.50$.

## Dimensions:

Height over all, Urinal only, 4 feet; width over all, 2 feet; base, from front to rear, 19 inches; at top, from front to rear, 12 inches; thickness, $13 / 4$ inches; distance from center of outlet to back 12 inches; outlet, $31 / 2$ inches, countersunk $41 / 2$ inches diameter and $3 / 4$ inch deep.

IDEAL PORCELAIN URINALS.


42 - C .
Two Ideal Porcelain Urinals with Flat Tops, Front Pieces and Ideal Porcelain Floor Slabs.

| Code <br> Number of Urinals | Parsoleta $1$ | Parsonic $\bullet$ | Parsuros ; | Partage 4 | Partaking j) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Price as described | \$100.00 | 187.00 | 273.00 | 360.00 | 447.00 |
| Shipping weight, lbs......................... | 800 | 1400 | 2000 | 2600 | 3200 |

Tank and Flush Pipe not included in above prices.
For Nickel-Plated Flush Connection and Spreader, add $\$ 14.00$ for each Urinal. For Nickel-Plated Strainer and Floor Flange, add $\$ 5.50$ for each Urinal.
Height from floor to top over all, 3 feet 7 inches; for other measurements see page 127 . Each Lrinal is provided with a $2 x+$ local vent, as shown by sectional view 44-C.

In Orders and Specifications give Plate Numbers and Number of Urinals.

## AUTOMATIC SIPHON EDUCTION PUBLIC URINALS.



446-C.
An accurate knowledge of the relative position of parts of both single and double fixture with either Plain or Lipped Troughs, will be gained by reference to the above drawings.

Full instructions for erecting and operating are furnished with each fixture.
Blue prints giving detailed dimensions of every part of complete fixture and all information essential to "roughing-in," will be sent on request.

The absence of movable parts in this Urinal is a strong point, because there is no likelihood of such a fixture getting out of order. The depth of water in these Urinals, 4 inches, is commendable and necessary from a sanitary point of view, as the large volume of water so greatly dilutes the urine that no offensive odors arise from it. The Urinal back is flushed and cleansed at intervals by a strong flow of water through the perforated pipe.

The interval of time between flushes is entirely controlled by the flow of water to the tank through the supply pipe, and may be easily regulated to act with any interval of time between flushes desired. The outlet siphon is well trapped and has a large opening which affords an easy passage for uncertain quantities of unclassified filth dropped into receptacles of this class.

## Dimensions:

These Urinals are made regularly from 4 to 16 feet long, as shown, and with lipped trough, each size being 1 foot longer than the next shorter length, but can be made any length, or more than 16 feet, if desired. The inlet and outlet siphon add 1 foot 3 inches to length over all, making a 4 -foot Urinal 5 feet 3 inches long from end of inlet at flush pipe to outer edge of siphon outlet. The Urinals are 9 inches from front to back, inside; 12 inches front to back outside; 8 inches deep inside; $201 / 2$ inches from floor to front of Urinal; and 30 inches from floor to top of back; from back wall to center of outlet, 6 inches; size of outlet, 3 inches. For weights, see page 136.

## AUTOMATIC SIPHON EDUCTION PUBLIC URINALS.



448 - ${ }^{\text {C }}$
Cut shows Plain Trough with Siphon Eduction Copper-Lined Wood Tank and Galvanized Iron Flush Pipe. Perforated Vash-Down Pipe fitted along Back (Brass on Enameled and Galvanized Iron on Painted Urinals).

| Length of Urinal, Feet. | Length Over All, |  | Painted. |  |  |  | Enameled. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | Code. | As Shown. | Code. | Lipped Trough. | Code. | As Shown. | Code. | Lipped Trough. |
| 4 | 5 | 3 | Partitudo | \$ 45.00 | Parumper | \$ 49.00 | Parvoice | \$ 70.00 | Pasamano | \$ 76.00 |
| 5 | 6 | 3 | Partitura | * 50.00 | Parusia | * 55.00 | Parvoline | + 80.00 | Pasapan | * 87.50 |
| 6 | 7 | 3 | Partivano | 55.00 | Parvaleza | 61.00 | Parvulez | 90.00 | Pasaporte | 99.00 |
| 7 | 8 | 3 | Partivit | 60.00 | Parvedade | 67.00 | Parygros | 100.00 | Pasaste | 110.50 |
| 8 | 9 | 3 | Partons | 65.00 | Parvenon | 73.00 | Parygrum | 110.00 | Pasaturo | 122.00 |
| 9 | 10 | 3 | Partout | 70.00 | Parvicolle | 79.00 | Parzival | 120.00 | Pascale | 133.50 |
| 10 | 11 | 3 | Partualis | 75.00 | Parvifica | 85.00 | Pasacalle | 130.00 | Pascaline | 145.00 |
| 11 | 12 | 3 | Partules | 80.00 | Parviflore | 91.00 | Pasadera | 140.00 | Pascamus | 156.50 |
| 12 | 13 | 3 | Paruisti | 85.00 | Parvitas | 97.00 | Pasadillo | 150.00 | Pascentum | 168.00 |
|  |  |  |  |  |  |  |  |  |  |  |

Longer lengths can be furnished. Prices on application. Painted Cast Iron Tanks can be furnished if desired, without extra charge.

Lead-Lined Tanks can be furnished to order. Prices on application.
Also made with Lipped Trough, as shown in Plate 450-C. Urinals with Lipped Troughs are otherwise the same as Plate 448-C.

The outlet is always securely trapped; the depth of water is always 4 inches, except just previous to siphoning, when it is raised to six inches; there are no movable parts, therefore most unlikely to need repairs.

Unless otherwise ordered, Urinals with Enameled interior and Outlet on right end, as shown, will be sent.

For approximate weight of above, see page 136. For dimensions and details, see page 129.

## AUTOMATIC SIPHON EDUCTION LIPPED PUBLIC URINALS.

FITTED WITH PARTITIONS.


$450-1$.

Cut shows Lipped Trough with Siphon Eduction Copper-Lined Wood Tank, Galvanized Iron Flush Pipe and Painted Iron Partitions, 24 inches apart. Perforated Wash-down Pipe fitted along back (Brass on Enameled and Galvanized Iron on Painted Urinals).

|  |  | Painted. |  |  |  | Enameled. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Urinal, Feet. | Partitions, Number of | Code. | With <br> Plain Trough. | Code. | As Shown. | Code. | With <br> Plain Trough. | Code. | As Shown. |
| 4 | 3 | Paschalis | \$ 60.00 | Pashaws | \$ 64.00 | Pasmaat | \$ 85.00 | Passacorde | \$ 91.00 |
| 6 | 4 | Paschite | 75.00 | Pasilaly | 81.00 | Pasmaban | 110.00 | Passadez | 119.00 |
| 8 | 5 | Pascoland | 90.00 | Pasiones | 98.00 | Pasmado | 135.00 | Passaport | 147.00 |
| 10 | 6 | Pascolava | 105.00 | Pasiteles | 115.00 | Pasmunt | 160.00 | Passarola | 175.00 |
| 12 | 7 | Pascuant | 120.00 | Pasithea | 182.00 | Paspales | 185.00 | Passation | 203.00 |
| 14 | 8 | Pasgang | 13.). 00 | Pasitrote | 149.00 | Pasquill | 210.00 | Passavoga | 231.00 |

Longer Urinals can be furnished. Prices on application.
Also made with Plain Trough as shown in Plate $448-C$. Urinals with Plain Troughs are otherwise the same as Plate $450-\mathrm{C}$.

Painted Cast Iron Tanks can be furnished, if desired, without extra charge. Lead-Lined Tanks can be furnished to order. (Prices on application.)

The Urinal illustrated on this page is 10 feet long, fitted with 6 partitions placed 2 feet apart. Partitions may be placed to suit purchaser.

For directions for setting and operating, statement of merits, etc., of these Urinals see page 129.
Unless otherwise ordered, Urinals with Enameled Interior and Outlet on right end, as shown, will be sent.

For approximate weight of above, see page 136 .

## AUTOMATIC SIPHON EDUCTION DOUBLE PUBLIC URINALS.

## FITTED WITH PARTITIONS.



Cut shows Lipped Trough with Siphon Eduction Copper-Lined Wood Tank, Galvanized Iron Flush Pipe, Painted Iron Partitions, 24 inches apart, and Backs. Perforated Wash-Down Pipes fitted along Backs (Brass on Enameled and Galvanized Iron on Painted Urinals).


Painted Cast Iron Tanks can be furnished, if desired, without extra charge. Lead-Lined Tanks can be furnished to order. (Prices on application.)

Unless otherwise ordered, Urinal with Enameled Interior and Lipped Trough, as shown, will be sent.

Sectional view of Urinals are shown on page 12!?
For approximate weights of above, see page 136.

## AUTOMATIC WASHOUT PUBLIC URINALS.



451-C.
With Automatic Copper-Lined Wood Tank and Galvanized Iron Flush Pipe. Perforated Wash-Down Pipes fitted along Back and Front of Urinal (Brass or Galvanized on Enameled and Galvanized on Painted Urinals, as listed below) and with heavy Brass Capping along Front.

| Length <br> Urinal, Feet. | With Galvanized Pipe. |  |  |  | With Brass Pipe. <br> Enameled. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Painted. |  | Enameled. |  |  |  |
|  | Code. | Price. | Code. | Price. | Code. | Price. |
| 5 | Passende | \$ 50.00 | Passitare | \$ 70.00 | Pastelone | \$ 75.00 |
| 6 | Passerage | 55.00 | Passivita | 78.00 | Pastenade | 85.00 |
| 7 | Passerino | 60.00 | Passless | 86.00 | Pasterma | 95.00 |
| 8 | Passform | 65.00 | Passonata | 94.00 | Pastiglia | 105.00 |
| 10 | Passifs | 75.00 | Passrecht | 110.00 | Pastinaca | 125.00 |
| 12 | Passinho | 85.00 | Passworte | 126.00 | Pastisson | 145.00 |
| 14 | Passiolo | 95.00 | Pastagem | 142.00 | Pastorage | 165.00 |
| 16 | Passional | 105.00 | Pastelier | 158.00 | Pastorally | 185.00 |
|  |  |  |  |  |  |  |

A dam near the outlet preserves a bed of water in the bottom of the Urinal Trough, and at each flushing the back and sides are thoroughly cleansed, in addition to the strong washout flush from the flush pipe end, which acts in the same way as that of a washout closet range.

Painted Cast Iron Tanks can be furnished, if desired, without extra charge. Lead-Lined Tanks can be furnished to order. (Prices on application.)

Trap standard enameled inside is furnished with enameled Urinals.
If trap standard is not wanted, deduct $\$ 5.00$ for enameled and $\$ 4.25$ for painted from lists.
If painted trap standard is wanted for enameled Urinal, deduct $\$ 0.75$ from list.

## Dimensions:

The lengths of Urinals are exactly as given in list above. When set as shown, the end of cleanout on trap standard extends 4 inches beyond the end of Urinal, which must be allowed for when roughing-in.

Height from floor to top of rim in front, 26 inches; height from floor to top of back, 36 inches; depth inside, $71 / 2$ inches; width inside, 9 inches; width, front to back, 12 inches, with trap set as shown; from wall to center of outlet, 5 inches; end of Urinal to center of outlet, $7 \frac{1}{2}$ inches; from floor to center of vent, $103 / 4$ inches; diameter of outlet, 3 inches.

Unless otherwise ordered, Urinal with Enameled Interior, with Brass Wash-Down Pipes and Outlet on right End, as shown, will be sent.

For approximate weights of above, see page 136.
In Orders and Specifications give Plate Numbers and Sizes.

## AUTOMATIC WASHOUT PUBLIC URINALS.


$452-\mathrm{C}$.
With Automatic Copper-Lined Wood Tank, Galvanized Iron Flush Pipe and Painted Iron Partitions, 24 inches apart. Perforated Wash-Down Pipes fitted along Back and Front of Urinal (Brass or Galvanized on Enameled and Galranized on Painted Urinals, as listed below) and with Heary Brass Capping along Front.

| Length of Urinal, Feet. | Partition, Number of. | With Galvanized Pipe. |  |  |  | With Brass Pipe. Enameled. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Painted. |  | Enameled. |  |  |  |
|  |  | Code. | Price. | Code. | Price. | Code. | Price. |
| 6 | 4 | Pastorise......... | \$ 75.00 | Pastufade ........ | \$ 98.00 | Pasturer.......... | \$105.00 |
| S | 5 | Pastority | $90.00$ | Pastulla | * 119.00 | Pastiell........... | \$130.00 |
| 10 | 6 | Pastuare .......... | 105.00 | Pastumn .......... | 140.00 | Pastwurt .......... | 155.00 |
| 12 | 7 | Pastube .. ...... | 120.00 | Pastunot ......... | 161.00 | Pataba ........... | 180.00 |
| 14 | 8 | Pastuck ........... | 135.00 | Pastupole ........ | 182.00 | Pataburt ......... | 205.00 |
| 16 | 9 | Pastude........... | 150.00 | Pastupun......... | 203.00 | Patabuzz ....... | 230.00 |

Trap Standard, Enameled Inside is furnished with Enameled Urinals.
If Trap Standard is not wanted, deduct $\$ 5.00$ for Enameled and $\$ 4.25$ for Painted from lists. Brass Flush Pipe can be furnished if desired. (Prices on application.)

Painted Cast Iron Tanks can be furnished, if desired, without extra charge. Lead-Lined Tanks can be furnished to order. (Prices on application.)

Unless otherwise ordered, Urinal with Enameled Interior, with Brass Wash-Down Pipes and Outlet on right end, as shown, will be sent.

For dimensions, see page 133.
For approximate weights, see page 136.

## CAST IRON ROLL RIM PUBLIC URINALS.

 IRON PIPE SIZE AND NICKEL-PLATED VENTED "P" TRAP.

455-C without Flush Pipe. $\mathbf{4 5 7 - C}$ as shown.

| Length of Urinal, Feet. | Painted. With Galvanized WashDown Pipe. |  | Deduct for Galvanized WashDown Pipe and Stop. | Enameled. With Brass WashDown Pipe. |  | Deduct for Brass Wash-Down Pipe and Stop. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Code. | Price. |  | Code. | Price. |  |
| $\stackrel{2}{2}$ | Paterniser | \$17.25 | \$ 3.50 | Patoisant | \$21.25 | \$ 5.00 |
| $\underline{1 / 2}$ | Patersonic | 18.25 | 4.00 | Patologos | *23.50 | \$ 5.75 |
| 3 | Patescunt | 19.50 | 4.25 | Patraque | 25.75 | 6.50 |
| $31 / 2$ | Pathans | 21.00 | 4.75 | Patricia | 28.00 | 7.25 |
| 4 | Pathetico | 22.25 | 5.00 | Patricide | 30.25 | 8.00 |
| 5 | Pathflies | 25.00 | 5.75 | Patricoles | 36.25 | 9.50 |
| 6 | Pathicos | 28.25 | 6.50 | Patrigno | 42.75 | 11.00 |
| 7 | Pathicum | 31.50 | 7.25 | Patriot | 49.25 | 12.50 |
| 8 | Pathless | 34.75 | 8.00 | Patrisso | 55.75 | 14.00 |
| 9 | Pathogenic | 38.00 | 8.75 | Patrobius | 62.25 | 15.50 |
| 10 | Pathogony | 41.25 | 9.50 | Patroclo | $68.75$ | $17.00$ |
| 12 | Pathology | 47.75 | 11.00 | Patrolle | 81.75 | 20.00 |

If without Nickel-Plated Trap, deduct $\$ 5.75$.
Waste Coupling for Lead Pipe is provided when Urinal is furnished without Trap.

## Dimensions:

Depth of Urinal, $71 / 2$ inches; front to back inside, $91 / 2$ inches; front to hack over all, 12 inches; back, 10 inches high.

Urinals over 5 feet in length are made in two or more pieces and are well bolted together.
Any Urinal listed can be furnished to order with outlet on left hand end, but will invariably be sent as shown, unless otherwise specified.

For approximate weights, see page 136.

## APPROXIMATE WEIGHTS CRATED.

## Automatic Siphon Eduction Public Urinals.

| Length, ft. .................................... | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ | $\mathbf{1 1}$ | $\mathbf{1 2}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $448-\mathrm{C}$, as shown, lbs................ | 350 | 375 | 400 | 425 | 500 | 550 | 800 | 650 | 700 |
| $450-\mathrm{C}$, as shown, lbs............... | 560 | $\ldots .$. | 705 | $\ldots .$. | 900 | $\ldots .$. | 1070 | $\ldots .$. | 1190 |
| $4501 / 2-\mathrm{C}$, as shown, lbs.............. | $\ldots .$. | $\ldots .$. | $\ldots .$. | $\ldots$. | $\ldots .$. | $\ldots .$. | $\ldots .$. | $\ldots$. | $\ldots .$. |

Flushing Pipe, per foot, lbs. ..... $21 / 2$
Traps, complete, each, lbs. ..... 75
Brackets, each, lbs ..... 9
Single Partition, lbs ..... 70

## Automatic Washout Public Urinals.

| Length, ft. | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451-C, as shown, lbs.. | 250 | 300 | 350 | 400 | 500 | 600 | 700 | 800 |
| $452-\mathrm{C}$, as shown, lbs.. | $\ldots$ | 630 |  | 750 | 920 | 1090 | 1260 | 1430 |
| Weight of separate parts. |  |  |  |  |  |  |  |  |

Flushing Pipe, per foot, lbs. ..... $21 / 2$
Trap Standard (18-inch), each, lbs. ..... 45
Brackets, each, lbs ..... 9
Roll RIm Public Urinals.


Above weights are for Enameled Fixtures; weights for Painted or Galvanized Fixtures are approximately 10 per cent less.

## VITREOUS CHINA PEDESTAL SIPHON JET URINAL.

WITH HIGH BACK



460 - ${ }^{\prime}$.

Has Horizontal Back Supply and Bottom Outlet.


One in a barrel.

## Dimensions:

Height at back, 29 inches; height from floor to lip, 20 inches; wilth at back, $131 / 2$ inches; distance from center of supply to floor, $261 / 2$ inches; from face of supply spud to center of outlet, $103 / 3$ inches; outlet, 2 inches inside and 3 inches over the flange.

## VITREOUS CHINA SIPHON JET URINALS.


461.1.

BACK OUTLET.


SECTIONAL, SHOWING OUTLET CONNECTION.

Code Patronize
Size, inches............................................................................................................................................... $18 x 21$ ½
Each. $\$ 15.00$
Weight each, pounds.
Inlet connection, one-inch Iron Pipe or one-inch Slip Joint; Outlet, two-inch Iron Pipe.
Center of Inlet connection to wall, $17 / 3$ inches; center of Outlet to top of Inlet connection, 187/8 inches.



## VITREOUS CHINA URINALS.



FLAT BACK CHINA URINAL.




## VITREOUS CHINA URINALS.



466 - ${ }^{(1 .}$

## CORNER CHINA URINAL.




467 - .
CORNER LIPPED CHINA URINAL.

| Code.. | Patusco | Patziges |
| :---: | :---: | :---: |
| Numbers | 1 | $\underline{2}$ |
| Size. | Large | Medrum |
| Inches | $12 \times 12$ | $11 \times 11$ |
| Each | \$10.00 | 8.00 |
| Weight | 21 | 17 |
| Shipping | 35/6 | $23 / 4$ |

## PORCELAIN ENAMELED IRON URINALS.

## STANDARD PATTERN



Corner.


## Half Circle.

## ENAMELED CORNER URINALS-470-C.

| Code | Paukant | Paukenton | Pauldron |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
| Length of side, inches.. | 7 | 9 | 12 |
| Each.. | \$1.75 | 2.25 | 2.75 |
| Weight each, lbs... | 8 | 9 | 13 |
| Shipping measurement each, cubic feet ........................................... |  |  |  |
| ENAMELED HALF CIRCLE URINALS-471-C. |  |  |  |
| Code. |  | Paulician | Paulilla |
| Numbers. |  | 1 | 2 |
| Length of back, inches. |  | 12 | 15 |
| Each.. |  | \$2.50 | 3.00 |
| Weight each, lbs...... |  | 9 | 16 |
| Shipping measurement each, cubic feet. |  | ......... |  |


$472 . \mathrm{C}$.

$473-\mathrm{C}$.
PORCELAIN ENAMELED FLAT BACK LIPPED URINAL.

15 inches high, 13 inches wide.
With Inlet and Outlet Couplings.

| Code......... | Paumett | Paumier |
| :--- | :---: | :---: |
| Style........ Enameled inside | Enameled all over |  |
| Each........ | $\$ 10.00$ | 12.00 |

## URINAL COCKS.

FOR IRON PIPE. SCREW ON TAIL.



450 - $\mathrm{C}^{\circ}$.

Compression

| Code....................... | Paumojer <br> Finished | Pauperabo <br> Nickel-Plated |
| :--- | :---: | :---: | :---: |
| Size, inch.................. | $1 / 2$ | $1 / 2$ |
| Per dozen ....................... $\$ 19.00$ | 22.00 |  |
| Weight per doz., lbs...... | $61 / 4$ | $61 / 4$ |

$480-\mathrm{C}$ is either 5 or 6 inches over all.
481. 1.

Fuller.


[^4]
## SELF-CLOSING URINAL COCKS.

FOR IRON PIPE. SCREW ON TAIL.



Pausabile Nickel-Plated 1/2
44.00
$81 / 2$
$484-\mathrm{C}$ is 6 or $71 / 2$ inches over all.
$485-\mathrm{C}$ is 6 inches over all.

One half dozen in a box.
$\dagger$ Carried in San Francisco only.

## URINAL TRAPS.

```
N:CKEL-PLATED BRASS URINAL TRAPS WITH ADJUSTABLE FLANGE AND STRAIGHT COUPLING.
```



488-1.

| Code | Pausando |
| :---: | :---: |
| Each | \$3.00 |
| Weigh | $4^{1 / 4}$ |
|  |  |

NICKEL-PLATED BRASS BAG TRAPS WITH SLIP JOINT OUTLET TUBE.

489. ${ }^{\text {C. }}$

Code.
Size, inches.......................................... $11 / 2$
Each................................................. \$2.75
Weight each, lbs.............................. $31 / 2$
One in a box.

## URINALOUTLET CONNECTIONS.

NICKEL-PLATED BRASS.


490-C.
For Slip Joint.
Code............................ Pauserl
Each............................ \$1.00
Length of Tube, in........ 3
Diameter of Tube, in.....
Weight each, lbs.
3
$11 / 4$
Can be used with 489-C.

URINAL INLET CONNECTIONS. BRASS.


491-C.
For Lead Pipe.
Code .

Each.

Pausest Pauseur Finished Nickel-Plated $\$ 1.00 \quad 1.35$


492-C.
With Coupling for Iron Pipe.
Finished Nickel-Plated

Each.
$\$ 1.00$
1.35

## ADJUSTABLE URINAL INLET CONNECTIONS.

NICKEL-PLATED BRASS WITH SLIP JOINT.

$498-\mathrm{C}$.
Code ......................................... Pausside
Each.............................. $\$ 3.40$
Weight each, lbs........................
URINAL WASTE PIPES
WITH FLANCE.

BRASS.

49.)-C.
$11 / 2$-inch Tubing 20 inches long.

## Co

Code.

Each .
Weight each, lbs......

Pauxent Polished $\$ 2.50$
.

Pauxillo Nickel-Plated
2.75

3

## ADJUSTABLE URINAL OUTLET CONNECTIONS.

NICKEL-PLATED BRASS WITH CLEANOUT AND ADJUSTABLE FLANGE.


494. ${ }^{\prime}$.

| Code | Pautaren |
| :---: | :---: |
| Each. | \$3.75 |
| Weigh |  |

Weight each, lbs

## WIRE BASKETS FOR URINALS.


$496 \mathbf{C l}^{\circ}$.

Code................................................... Pavanion
Each .............................................. \$......
Weight each, lbs
Prices on application.
When ordering be particular to state the exact style and the number or size of Urinal Basket is intended for.

## ROUND CORNER AUTOMATIC TANKS.

NATURAL OAK, ZINC LINED, PATENT TANK BOARD.


Cut shows style of Nos. 1 and 2.
No. 3 has no top moulding.

## AUTOMATIC URINAL TANKS.

CAST IRON. PAINTED.
With Fittings and Single Couplings.


ROUND CORNER AUTOMATIC TANKS.

## Code.



Paveam Size, inches

1
Capacity, gallon

## $16 \times 8 \times 11$

 6 5 or 6 $11 / 2$$\$ 11.00$
35
2

## AUTOMATIC URINAL TANKS

Code

## Numbers

Capacity, gallons
Number of Urinals Tank will flush
Parentato

Number of Hoppers Tank will flush
Size coupling, inches.
1
2
2
1

Each.
...................................................................... . ......... $\$ 8.50$
Our Automatic Urinal Tanks are simple in construction, positive in action and can be regulated to flush as often as necessary.

## NICKEL-PLATED BRASS CONNECTIONS FOR AUTOMATIC FLUSH TANKS.



In Orders and Specifications give Plate Numbers and Sizes.

## URINAL STALL GUTTERS.

## PORCELAIN ENAMELED INSIDE. PAINTED OUTSIDE



509 -
For Single Range of Stalls.
Sections are 5 feet long and $t$ inches wide; outlet piece has spigot end for 2 -inch cast soil pipe. Code $\qquad$ Pavibundo

One section with outlet piece and grating $\$ 12.50$ Weight, lbs.

Additional sections, $\$ 10.75$ each.
Price of section any length under 5 feet to make up special lengths, same price as full section.

## WASH DOWN PIPES.

## FOR PUBLIC URINALS.

$1 / 2$-inch Iron Pipe Size with $1 / 16$-inch holes 1 inch apart.
$\widetilde{\sim}$



511-C.

| Code. | Pavidabe | Pavideti |
| :---: | :---: | :---: |
| Finish | Polished | Nickel-Plated |
| Per foot | \$1.25 | 1.50 |
| Weight per foot, lbs. | 7/8 | 7/8 |

Price does not include Cap or Stop Cock.
Can furnish any size, style or length to order.

## ANGLE STALL CLAMPS.

|  |  |  |  | BRASS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | c. |  |  |  |  |  |  |  |
|  | 512-C. |  |  | 513-C. |  |  | 314-C. |  |  |
| Code | Plain. <br> Paviendo <br> Finished | Pavillon Nickel-Plated | Code ........ | Heavy. <br> Paviment <br> Finished | Paviola Nickel-Plated | Code | Fancy. Paviour Finished |  | $\begin{aligned} & \text { Paviso } \\ & \text { ckel-Plated } \end{aligned}$ |
| Each. | \$0.50 | . 60 | Each........ | \$0.75 | . 90 | Each. | \$...... |  | . |

State how many single and how many double nut bolts are required and thickness of Slab when ordering Angle Clamps with Bolts.

In Orders and Specifications give Plate Numbers.

## URINAL STALL CLAMPS.

Each Furnished with One Double Nut Bolt.
BRASS.


516-C.

| LEFT TOP. |  |  |
| :---: | :---: | :---: |
| Code........ | Pavitaret | Pavitate |
|  | Finished | Nickel-Plated |

Each $\qquad$

517.C.

CENTER TOP.

| Code........ | Pavoison <br> Finished | Pavonaco |
| :---: | :---: | :---: |
|  | Nickel-Plated |  |

Each........
$\$ 1.50$
1.75

$520 \cdot \mathrm{C}$.
CENTER BOTTOM.

| Code........ | Pavorde <br> Finished | Pavots <br> Nickel-Plated |
| :---: | :---: | :---: |
| Each....... | $\$ 1.50$ | 1.75 |

521-C.
RIGHT BOTTOM.

| Code........ | Pawnor <br> Finished | Paxilli <br> Nickel-Plated |
| :--- | :---: | :---: |
| Each........ | $\$ 1.25$ | 1.50 |


$\$ 1.25$
1.50
518-C.
RIGHT TOP.

| Code........ | Pavonador Pavoncell <br> Finished |  |
| :---: | :---: | :---: |
| Each........ | $\$ 1.2 .5$ | 1.50 |



524-C.
WALL PLATE. Finished Nickel-Plated \$....
Each. $\qquad$

* Plain Leg for 523-C, 12 inches long: Finished, $\$ 1.00$; Nickel-Plated, $\$ 1.2 .5$.

When ordering Clamps for Marble or Slate, state thickness of Slabs, Partitions, etc., and number of Single and Double Nut Bolts required.

## ORNAMENTAL BRASS RAILING STANDARDS.



When ordering Top Standards for Marble or Slate, state thickness of Slabs, Partitions, etc.

## ORNAMENTAL BRASS LEGS.

FOR MARBLE OR SLATE STALLS. HEIGHT, 12 INCHES.

$534-(1$.
End.
Code. $\qquad$ $\begin{array}{ccc}\text { Peaceless } & \text { Peachy } & \text { Peacock } \\ \text { Finished } & \text { Nickel-Plated } & \text { Finished }\end{array}$
$\$ 3.50 \quad 4.00 \quad 3.50$
$21 / 2 \quad 23 / 8$


336 (. Partition. Peahen Nickel-Plated 4.00

23/8

Peakish Pearlash Vickel-Plated
4.50

234

$537-\mathrm{C}$.
Angle.
Pearmain
Peasants Finished Nickel-Plated
$3.50 \quad 4.00$
23/4
23/4

When ordering Legs for Marble or Slate, state thickness of Slabs, Partitions, etc.

## PLAIN BRASS RAILING STANDARDS.

FOR MARBLE OR SLATE STALLS. HEIGHT, 12 INCHES.


When ordering Top Standards for Marble or Slate, state thickness of Slabs, Partitions, etc.

## PLAIN BRASS LEGS.

## FOR MARBLE OR SLATE STALLS. HEIGHT, 12 INCHES.



When ordering Legs for Marble or Slate, state thickness of Slabs, Partitions, etc.

## BOLTS FOR MARBLE OR SLATE.



In ordering Bolts for Marble or Slate, state thickness of Slab.

BOLT HEADS.
BRASS NICKEL-PLATED.


360 - C.
Square.
Code .........
Style....... Style..........
Per dozer...


361-C.
Octagon.
Pectendos Pectinator Square
$\$ .50$ Octagon

45


562-C.

$$
7 / 16 \text {-inch square, } 1 / 4 \text {-inch thread. }
$$ Code.......................... Pectoral Per dozen.

## SQUARE NUTS.

BRASS.
$\$ 0.25$

## WASHERS.

BRASS NICKEL-PLATED.

$566-\mathrm{C}$.
Per dozen ..... -Weight per gross, lbs... $1 / 2$

One gross in a package.

## THREADED BRASS ROD.

```
CONTINUOUS THREAD 12 INCHES LCNG, 1/ INCH DIAMETER
```



$$
\mathbf{3 6 8} \text {-C. }
$$



## EXPANSION BOLTS.

BRASS.


569-C.
NICKEL-PLATED ROUND HEAD.
Code.....................................................................
Size....

| Pecudifer | Peculator | Peculio |
| :---: | :---: | :---: |
| $1 / 4 \times \mathbf{1}^{1 / 4}$ | $1 / 4 \times \mathbf{1}^{1 / 2}$ | $\mathbf{1} 1 / 2 \times \mathbf{2}$ |
| $\$ 0.26$ | .26 | .26 |



570-C.
NICKEL-PLATED COUNTER SUNK HEAD.

| Cod | Pecunia | Pecuniale | Pecunious |
| :---: | :---: | :---: | :---: |
| Siz | 1/4x11/4 | ${ }^{1}+\mathrm{x} 1{ }^{1} / 2$ | ${ }^{1}+\mathrm{x} 2$ |
| Each | \$0.26 | 26 | 26 |

The size of the bolt is always understood to be the diameter of the brass of which it is made, not of the expansion parts.

Above bolts are for $5_{16}^{\prime}$-inch hole and will expand to $7 / 16$-inch.


571-C.
FINISHED BRASS. ROUND HEAD.

Code............................................... Pedaggio
Size, inches..........................................3/16..11/4
Per dozen
$\$ 0.80$

For $3 / 8$-inch hole and will expand to $1 / 2$-inch.

WOOD SCREWS.
FLAT HEAD IRON.

| Code...... | Pedagna | Pedagogo | Pedales | Pedalite |
| :---: | :---: | :---: | :---: | :--- |
| Size $\ldots \ldots .$. | $3 / 4 \times \mathbf{9}$ | $\mathbf{1 \times 1 0}$ | $\mathbf{1} 1 / 2 \times 1 \mathbf{1 2}$ | $\mathbf{2 \times 1 \mathbf { 2 }}$ |
| Per gross | $\$ 1.00$ | 1.20 | 1.65 | 2.00 |

One gross in a package.
5\%-C.
ROUND HEAD IRON NICKEL-PLATED.

| Code.. Size... | Pedamen $1 / 2 \times 6$ | Pedaneo $3 / 4 \times 8$ | $\begin{aligned} & \text { Pedautar } \\ & \mathbf{1 x 1 0} \end{aligned}$ | Pedantical $1^{1 / 4} \times 10$ | Pedantize $11 / 2 \times 12$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Per gross | \$0.80 | . 95 | 1.20 | 1.30 | 1.65 |
| Code Size. | Pedantry <br> $0 \times 12$ | Pedation <br> $21 / 2 \times 12$ | Pedaturos <br> $3 \times 9$ | Pedell <br> $3 \times 14$ | Pederota $4 \times 14$ |
| Per gross | \$2.00 | 2.60 | 3.10 | 3.50 | 5.90 |

One gross in a package.

ROUND HEAD BRASS NICKEL-PLATED.


## BOX FLANGED SPRING HINGES FOR STALLS.



580-('.
SINGLE BOX HINGE.

| Code | Pedimento | Pedinando |
| :---: | :---: | :---: |
|  | Finished | Nickel-Plated |
| Length of Flange, in | $33 / 4$ | $33 / 4$ |
| Per pair.. | \$5.50 | 6.00 |
| Weight, per pair, lbs. | $21 / 2$ | $21 / 2$ |



581-1.
DOUBLE BOX HINGE.

| Code. | Pedinassi | Pedinava |
| :---: | :---: | :---: |
|  | Finished | Nickel-Plated |
| Length of Flange, in. | 33/4 | 33/4 |
| Per pair.. | \$13.00 | 13.50 |
| Weight, per pair, lbs | 3 | 3 |

580-C Single Box Hinges are also made with one side of box loose so same may be adjusted to any thickness of Marble.

State thickness of door and Marble when ordering.

## STALL DOOR BOLTS AND STOPS.


585.C.

OUTSIDE VIEW.


386-1.
INSIDE VIEW.


587-C.
STRIKE PLATE. INDICATOR BOLT AND STRIKE PLATE.

Extension for 1 to 2 -inch doors.

| Code | Pedleress | Pedocomio |
| :---: | :---: | :---: |
|  | Finished | Nickel-Plated |
| Inches | 21/4x2 | 21/4 x 2 |
| Each. | \$1.25 | 2.00 |

W'eight each, lbs............... 1/2 1/2
State thickness of Marble when ordering.
One in a box.

## SECTION 3.

SOLID
PORCELAIN BATHS,
IRON PORCELAIN ENAMELED BATHS.
STEEL, COPPER AND ZINC BATHS.
SHOWER BATHS AND
BATH ROOM FITTINGS.


Holbrook, Merrill \& Stetson, INCORPORATED.

## BATHS AND BATH ROOM FITTINGS.

"Ideal" Solid Porcelain Baths, illustrated on the first seven pages of this section, are produced by the best mechanical talent and made of the finest materials. Special attention has been given to durability as well as finish. All of the fixtures shown on the above-mentioned pages are First Quality or "Class A" goods. We can, when competition makes it necessary, quote prices on "Class B" and "Class C" wares.

Iron Porcelain Enameled Baths, illustrated on the pages following Solid Porcelain Ware, are all guaranteed by the manufacturers as well as ourselves, and are of the finest quality and latest design in their different classes.

Bath Room Fittings are polished brass, heavily nickel-plated, the better grade of towel bars and shelves being of plate glass.

In ordering goods from this section by telegraph it is only necessary to use the code word over or opposite the number or size of the article wanted, preceded by words from code in front of this book.

Example: Cubicados one perigean.
Translation: Ship via Southern Pacific Railroad one five-foot-six special enameled bath tub with three-inch rim.

## "IDEAL" SOLID PORCELAIN BATHS.

FRENCH PATTERN - ON BASE.

TO TILE IN AT BACK.


600 - .

French Pattern Roll Rim Solid Porcelain Bath, Glazed Pure White inside and over Roll Rim, outside unfinished; Nickel-Plated Bell Supply and Waste with China Name Plates for Hot and Cold Water and Waste.

| Code for Right Hand as | Pepiones | Pepite |
| :---: | :---: | :---: |
| Code for Left Hand | Pepitoria | Pepitoso |
| Size, feet. | 5 | $51 / 2$ |
| Length outside Tub only, inches. | 60 | 66 |
| Each, complete as described | \$186.00 | 196.00 |
| Shipping weight, pounds.. | 775 | 800 |
| Shipping measurement, cubic feet | $391 / 2$ | 423/4 |

## For Exterior Finish and Decorations, see page 186.

Dimensions: Width outside, 30 inches; depth inside, 19 inches; height from floor to top of rim. 21 inches.

Nickel-Plated Sponge Holder No. 180, $\$ 1.60$. Nickel-Plated Towel Bar No. 18,30 inches long, $\$ 3.50$. Nickel-Plated Soap Dish with removable Porcelain Tray No. 259, $\$ 2.00$.

## "IDEAL" SOLID PORCELAIN BATHS.

"NEW MONARCH" - ON BASE.

## TO TILE IN CORNER.



602 C.
"New Monarch" Roll Rim Solicl Porcelain Bath, Glazed Pure White inside and over Roll Rim outside unfinished; Nickel-Plated Bell Supply and Waste with China Name Plates for Hot and Cold Water and Waste.

| Code for Right Hand as shown. | Peplides | Peplium | Pepolim |
| :---: | :---: | :---: | :---: |
| Code for Left Hand................ | Peponite | Pepperco | Peppernel |
| Size, feet. | 5 | $51 / 2$ | 6 |
| Length outside, Tub only inches | 60 | 66 | 72 |
| Each, complete as described. | \$186.00 | 196.00 | 216.00 |
| Shipping weight, pounds......... | 775 | 800 | 830 |
| Shipping measurement, cubic feet | $391 / 2$ | 423/4 | 461/4 |

For Exterior Finish and Decorations, see page 186.
Dimensions: Width outside, 30 inches; depth inside, 19 inches; height from floor to top of rim, 21 inches.

Vitreous China Soap Holder, $\$ 1.90$. Vitreous China Sponge Holder, $\$ 2.50$. Nickel-Plated Towel Bar No. 16, 30 inches long, $\$ 3.50$. Nickel-Plated Hand Rail, 18 inches long, $\$ 4.00$.

## "IDEAL" SOLID PORCELAIN BATHS.

FRENCH PATTERN - ON FEET.



604-C.

French Pattern Roll Rim Solid Porcelain Bath, Glazed Pure White inside and over Roll Rim, outside unfinished; four Glazed Legs; Nickel-Plated Bell Supply and Waste with China Name Plates for Hot and Cold Water and Waste.

| C | Peptico | Peptique | Peptogene | Pepulero | Pepulit | Pequice |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, feet | $41 / 2$ | 5 | $51 / 2$ | 6 | $61 / 2$ | 7 |
| Length outside, Tub only, inches | $5 \pm$ | 60 | 66 | 72 | 78 | 84 |
| Each, complete as described | \$140.00 | 150.00 | 160.00 | 180.00 | 200.00 | 225.00 |
| Shipping weight, pounds. | 660 | 735 | 760 | 795 | 1150 | 1200 |
| Shipping measurement, cubic feet | $371 / 3$ | 41 | 441/3 | 48 | $571 / 2$ | 67 |

For Exterior Finish and Decorations, see page 186.
Dimensions: Width outside, 30 inches; depth inside, 18 inches; height from floor to top of rim, $251 / 2$ inches; legs $41 / 2$ inches.

Note-Baths 6 feet 6 inches and 7 feet long measure 33 inches wide outside.
Nickel-Plated Sponge holder No. 180, \$1.60. Nickel-Plated Towel Bar No. 16, 30 inches long, $\$ 3.50$. Nickel-Plated Soap Dish with removable Porcelain Tray No. 259, $\$ 2.00$.

## "IDEAL" SOLID PORCELAIN BATHS.

```
FRENCH PATTERN - ON BASE.
```


$606 \cdot C^{\prime}$.

French Pattern Roll Rim Solid Porcelain Bath, Glazed Pure White inside and over Roll Rim, outside unfinished; Nickel-Plated Bell Supply and Waste with China Name Plates for Hot and Cold Water and Waste.

| Code | Peractio | Peracute | Peragites | Peragito |
| :---: | :---: | :---: | :---: | :---: |
| Size, feet | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length outside, Tub only, inches. | 54 | 60 | 66 | 72 |
| Each, complete as described. | \$151.00 | 161.00 | 176.00 | 196.00 |
| Shipping weight, pounds..... ..... Shipping measurement, cubic fee | 670 36 | 775 $391 / 2$ | 800 $423 / 4$ | 830 $461 / 4$ |

For Exterior Finish and Decorations, see page 186.
Dimensions: Width outside, 30 inches; depth inside, 18 inches; height from floor to top of Rim, 21 inches.

Nickel-Plated Combination Sponge and Soap Holder, \$...... Nickel-Plated Towel Bar No. 16, 30 inches long, $\$ 3.50$.

## "IDEAL" SOLID PORCELAIN BATHS.

```
ROMAN PATTERN - ON BASE.
```



608-C.

Roman Pattern Roll Rim Solid Porcelain Bath, Glazed Pure White Inside and over Roll Rim, outside Unfinished; Nickel-Plated Bell Supply and Waste with China Name Plates for Hot and Cold Water and Waste.

| Code | Peragrada | Peralbos | Peralejo | Peraltar |
| :---: | :---: | :---: | :---: | :---: |
| Size, feet. | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length outside, tub only, inches.. | 54 | 60 | 66 | 72 |
| Each, complete as described | \$151.00 | 161.00 | 176.00 | 196.00 |
| Shipping weight, pounds. | 670 | 775 | 800 | 815 |
| Shipping measurement, cubic feet | $371 / 2$ | 411/4 | 45 | 483/4 |

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width outside, tub only, 30 inches; depth inside, 18 inches; height from floor to top of rim, 21 inches.

Nickel-Plated Sponge Holder, No. 11, \$1.60. Nickel-Plated Soap Dish, No. 62, \$1.50. NickelPlated Towel Bar, No. 16, 30 inches long, $\$ 3.50$.

## WITH NICKEL-PLATED BELL SUPPLY AND WASTE WITH CHINA NAME PLATES.


610.C.

On Legs.



612-C.
On Base.


For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Applying to $610-\mathrm{C}$ and $612-\mathrm{C}$ - Length, 30 inches; width, 27 inches over all; height at back, $203 / 4$ inches; height at front, 15 inches.

## "IDEAL" SOLID PORCELAIN FOOT BATHS.

WITH NICKEL-PLATED BELL SUPPLY AND WASTE WITH CHINA NAME PLATES.



613-C.
On Legs. Glazed Pure W̌hite Inside and Outside. Waste at bottom in center.
Code.Each, complete as described.$\$ 55.00$
Shipping weight, lbs. ..... 200
Shipping measurement, cubic feet. ..... S


614-C.
On Base. Glazed Pure White Inside and Outside. Waste through back.
Code.
Each, complete as described. ..... $\$ 56.00$
Shipping weight, lbs.. ..... 230Shipping measurement, cubic feet$111 / 4$For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Applying to $612-\mathrm{C}$ and $614-\mathrm{C}$, length outside, 26 inches; width outside, $211 / 2$ inches; height outside, 13 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

## THIS BATH IS DESIGNED FOR SETTING IN MARBLE OR TILE WAINSCOTED RECESS.



616-C.

Porcelain Enameled Bath with Nickel-Plated Bell Supply and Waste Fittings; $3 / 4$-inch Iron Pipe Size Supply Pipes.


## Dimensions:

Width from wall over front rim, $281 / 2$ inches; width of roll rim, $31 / 2$ inches; flat rim, $21 / 4$ inches over all, ( 1 inch outside tile or marble); depth inside, $171 / 2$ inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

This Bath is designed for setting into tile wainscoting, and can be furnished for right or left hand corner. Fittings can be furnished on exposed end of tub, if desired, instead as shown.

$618 . \mathrm{C}$.

## Cut Shows Right Hand Corner Pattern.

Porcelain Enameled Bath with Nickel-Plated Bell Supply and Waste Fittings; $3 / 4$-inch Iron Pipe Size Supply Pipes.


## Dimensions:

Width from wall over front rim, $28 \frac{1}{2}$ inches; width of roll rim, $31 / 2$ inches; flat rim, $21 / 4$ inches over all ( 1 inch outside tile); depth inside, $171 / 2$ inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

RECEPTORS, SITZ AND FOOT BATHS WITH BASE INSTEAD OF FEET, TO CORRESPOND WITH THIS BATH, CAN BE FURNISHED.



With 43/4-inch Enameled Roll Rim and Flanged Base; Nickel-Plated Bell Supply Fittings with Imperial Waste; $3 / 4$ inch Iron Pipe Size Supply Pipes with Unions at Floor.


One in a crate.

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 25 inches; width over rim, $34^{1 / 2}$ inches; depth inside, $18 \frac{1}{2}$ inches; height from bottom of flange to top of rim, $231 / 2$ inches; depth of flange or base only, 5 inches; roll rim, $43 / 4$ inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.



622-C.

With 43/4-inch Enameled Roll Rim; Nickel-Plated Bell Supply Fittings and Imperial Waste; 3/4-inch Iron Pipe Size Supply Pipes, with Unions at floor; Exterior Finished in No. 1 Zinc White.

| Code. | Perblandi | Perboni |
| :---: | :---: | :---: |
| Size, feet | 5 | - 1 1/2 |
| Length over rim, inches | 69 | 75 |
| Length inside, inches. | 59 | 65 |
| Each, complete as described. | \$94.50 | 100.00 |
| Shipping weight, pounds .. | 375 | 400 |
| Shipping measurement, cubic feet.. | $343 / 4$ | $371 / 2$ |

One in a crate.

If without Exterior Finish, deduct $\$ 16.00$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 25 inches; width over rim, $341 / 2$ inches; depth inside, 18 inches; height from floor to top of rim, $231 / 2$ inches; roll rim, $43 / 4$ inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.



624-C.

With 3-inch Enameled Roll Rim; Nickel-Plated Bell Supply Fittings with Imperial Waste; $3 / 4$-inch Iron Pipe Size Supply Pipes, with Unions at Floor; Exterior Finished in No. 1 Zinc White and Three Gold Lines.


One in a crate.

If without Exterior Finish and Gold Lines, deduct $\$ 19.00$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, $25 \frac{1}{2}$ inches; width over rim, $301 / 2$ inches; depth inside, $181 / 4$ inches; height from Hoor to top of rim, 23 $3 / 4$ inches; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.



626-C.

With 3-inch Enameled Roll Rim; Nickel-Plated Bell Supply Fittings with Imperial Waste; 3/4 Iron Pipe Size Supply Pipes, with Unions at Floor; Finished in No. 1 Zinc White with Gold Bands.


One in a crate.

If without Gold Bands, deduct $\$ 3.00$. If without Exterior Finish, deduct $\$ 16.00$. For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 26 inches; width over rim, 32 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

$\ddagger 628 .{ }^{\circ}$.

With 43/4-inch Enameled Roll Rim; Nickel-Plated Bell Supply Fittings with Imperial Waste; 3/4-inch Iron Pipe Size Supply Pipes.


One in a crate.

If with Exterior finished No. 1 Zinc White and Three Gold Lines, add $\$ 19.00$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, $251 / 2$ inches; width over rim, 35 inches; depth inside, $181 / 2$ inches; height from Hoor to top of rim, 24 inches; roll rim, $43 / 4$ inches.
+Carried in San Francisco only.

## H. M. \& S. PORCELAIN ENAMELED BATHS.


$\dagger 630$ - C .

With 3-inch Enameled Under-Roll Rim; Cut for Double Bath Cock; $33 / 8$-inch center to center of supplies, Common Overflow and Waste Plug.

| Code. | Perdignos | Perdigoto | Perdisert | Perdivido |
| :---: | :---: | :---: | :---: | :---: |
| Size, feet | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches. | 54 | 60 | 66 | 72 |
| Length, inside, inches. | 48 | 54 | 60 | 66 |
| Each, as described. | \$47.00 | 52.00 | 58.00 | 64.50 |
| Shipping weight crated, lbs. | 350 | 400 | 425 | 475 |
| Shipping measurement, cubic feet. | 27 1/2 | 301/4 | 33 | $351 / 2$ |

For Brass Overflow Horn with Nickel-Plated Strainer and Nickel-Plated Plug with Rubber Stopper, add $\$ 1.00$.

For Exterior Finish and Decorations, see pages 194 and 195.
For Supply and Waste Fittings, see pages 200 to 207.

## Dimensions:

Width inside, 25 inches; width over rim, 31 inches; depth inside, 19 inches; height from floor to top of rim, $241 / 2$ inches; center of waste to outside of rim, $71 / 2$ inches.
$\dagger$ Carried in San Francisco only.

## H. M.\& S. PORCELAIN ENAMELED BATHS.



632-C.

With 3-inch Enameled Roll Rim, with 5-inch Extension at Fitting End; Nickel-Plated Top Supply Fittings and Imperial Bath Waste, with Shampoo Sprinkler and Rubber Tube; $3 / 4$-inch Iron Pipe Size Supply Pipes; Exterior Finished in No. 1 Zinc White.

| Code. | Perdolesco | Perdomare | Perdono | Perdrix |
| :---: | :---: | :---: | :---: | :---: |
| Size, feet. | 4 | $41 / 2$ | 5 | $51 / 2$ |
| Length over rim, inches | 56 | 62 | 68 | 74 |
| Length inside, inches.. | 48 | $533 / 4$ | 60 | 66 |
| Each complete as described | \$76.50 | 77.00 | 83.00 | 89.50 |
| Shipping weight, lbs.. | 300 | 325 | 350 | 375 |
| Shipping measurement, cubic feet | $241 / 2$ | 27 | $291 / 3$ | $312 / 3$ |

One in a crate.
If without Exterior Finish, deduct $\$ 16.00$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, 22 inches; roll rim, 3 inches, and 5 -inch extension at fiting end.

## H. M. \& S. PORCELAIN ENAMELED BATHS.


634.C.

With 3-inch Enameled Full Roll Rim with Wide Flat Bottom and Flanged Base, Nickel-Plated Bell Supply Fittings and Imperial Waste; $3 / 4$-inch Iron Pipe Size Supply Pipes.


One in a crate.

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 24 inches; width over rim, 30 inches; depth inside, $171 / 2$ inches; height from bottom of flange to top of rim, $201 / 2$ inches; depth of flange or base only, $41 / 2$ inches; width of roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

```
DESIGNED FOR THE PURPOSE OF REPLACING COPPER TUBS OCCUPYING LIMITED SPACE.
```



636-C.

With $13 / 4$-inch Enameled Roll Rim; Drilled for Waste, 2 $1 / 2$-inch Overflow and $11 / 4$-inch Cock Holes, $33 / 8$-inch center to center.

| Code. | Perengano | Perennita | Perensap | Perfacete | Perfacile |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, feet. | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches. | 48 | 54 | 60 | 66 | 72 |
| Length inside, inches.. | 45 | 51 | 57 | 63 | 69 |
| Each | \$27.00 | 27.50 | 30.50 | 35.00 | 40.00 |
| Shipping weight, lbs.. | 250 | 275 | 300 | 325 | 350 |
| Shipping measurement, cubic feet.. | 183/4 | 21 | 23 | 25 | 27 |
| in a crate. |  |  |  |  |  |

For Brass Overflow Horn with Nickel-Plated Strainer and Nickel-Plated Waste Plug with Rubber Stopper, add $\$ 1.00$.

For Supply and Waste Fittings, see page 200 to 207. For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 21 inches; width over rim, $241 / 2$ inches; depth inside, 17 inches; height from floor to top of rim, 23 inches; roll rim, 13/4 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

```
DESIGNED FOR THE PURPOSE OF REPLACING COPPER TUBS OCCUPYING LIMITED SPACE.
```

637 -C.

With 13/4-inch Enameled Roll Rim; No. $41 / 2$ Nickel-Plated Fuller Double Bath Cock, with $1 / 2$-inch Iron Pipe Size Straight Supply Pipes; Nickel-Plated Connected Waste and Overflow, with Rubber Stopper and Nickel-Plated Chain.

| Code | Perfacilis | Perfacundo | Perfecteur | Perfectrix | Perferendo |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, fee | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches | 48 | 54 | 60 | 66 | 72 |
| Each, complete as described.. | \$35.00 | 35.50 | 38.50 | 43.00 | 48.00 |
| Shipping weight, lbs. $\qquad$ Shipping measurement, cubic feet. $\qquad$ | 250 | 280 21 | 310 23 | 335 25 | 360 27 |

If without Nickel-Plated Supply Pipes, deduct $\$ 2.50$.
If without No. $41 / 2$ Nickel-Plated Fuller Cock, deduct $\$ 3.00$.
If without Nickel-Plated Connected Waste and Overflow, deduct $\$ 2.50$.
For Supply and Waste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 21 inches; width over rim, $24^{1 / 2}$ inches; depth inside, 17 inches; height from floor to top of rim, 23 inches; roll rim, $13 / 4$ inches.

## H. M. \& S. "PREMIER" PORCELAIN ENAMELED BATHS.

SEMI-FLAT BOTTOM.



With 3-inch Enameled Roll Rim and Semi-Flat Bottom; drilled for Double Bath Cock, $33 / 8$ inches center to center of Supplies, Overflow and Waste Plug.


For Brass Overflow Horn with Nickel-Plated Strainer and Nickel-Plated Waste Plug with Rubber Stopper, add $\$ 1.00$.

For Supply and Waste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, 22 inches; roll rim, 3 inches; center of waste to outside of rim at waste end, $71 / 2$ inches.
$\dagger$ Carried in San Francisco only.

## H. M. \& S. "PREMIER" PORCELAIN ENAMELED BATHS.

SEM.-FLAT BOTTOM.



With 3-inch Enameled Roll Rim and Semi-Flat Bottom; No. $41 / 2$ Nickel-Plated Fuller Double Bath Cock with Straight Supply Pipes and Nickel-Plated Connected Waste and Overflow with Rubber Stopper.

| Code | Perfetto | Perfidens | Perfidie | Perfilado |
| :---: | :---: | :---: | :---: | :---: |
| Size, feet | 41/2 | 5 | $51 / 2$ | 6 |
| Length over rim, inches | 54 | 60 | 66 | 72 |
| Length inside, inches. | 48 | 54 | 60 | 66 |
| Each, complete as described. | \$37.25 | 40.50 | 44.50 | 50.00 |
| Shipping weight, lbs.... | 330 | 375 | 400 | 450 |
| Shipping measurement, cubic feet | 273/4 | $301 / 2$ | 331/4 | 36 |

If without Nickel-Plated Supply Pipes, deduct $\$ 2.50$.
If without No. $41 / 2$ Nickel-Plated Fuller Cock, deduct $\$ 3.00$.
If without Nickel-Plated Connected Waste and Overflow, deduct $\$ 2.50$.
For Supply and Waste Fittings see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, 22 inches; roll rim, 3 inches; center of waste to outside of rim at waste end, $71 / 2$ inches.
$\dagger$ Carried in San Francisco only.

In Orders and Specifications give Plate Numbers and Sizes.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

FLAT BOTTOM.



640-C.

With 3-inch Enameled Roll Rim and Wide Flat Bottom; Drilled for Double Bath Cock, $33 / 8$ inches center to center of Supplies, Overflow and Waste Plug.


For Brass Overflow Horn with Nickel-Plated Strainer and Nickel-Plated Waste Plug with Rubber Stopper, add $\$ 1.00$.
For Supply and Waste Fittings see pages 200 to 207 .
For Exterior Finish and Decorations see pages 194 and 195.

## Dimensions :

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

FLAT BOTTOM



642-C.

With 3-inch Enameled Roll Rim and Wide Flat Bottom; No. 4½ Nickel-Plated Fuller Double Bath Cock with $1 / 2$-inch Iron Pipe Size Offset Supply Pipes and Nickel-Plated Comnected Waste and Overflow with Rubber Stopper.


One in a crate.
If without Nickel-Plated Supply Pipes, deduct $\$ 2.75$. If without No. $41 / 2$ Nickel-Plated Fuller Cock, deduct $\$ 3.00$. If without Nickel-Plated Connected Waste and Overflow, deduct $\$ 2.50$.

For Supply and Waste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

FLAT BOTTOM.


$644-\mathrm{C}$.

With 3-inch Enameled Roll Rim and Wide Flat Bottom; Nickel-Plated No. $41 / 2$ Fuller Double Bath Cock, with $\mathrm{I} / 2$-inch Iron Pipe Size Nickel-Plated Offset Supply Pipes and Nickel-Plated "Favorite" Bath Waste.


One in a crate.
If without Nickel-Plated Supply Pipes, deduct $\$ 2.75$. If without No. $41 / 2$ Nickel-Plated Fuller Cock, deduct $\$ 3.00$. If without Nickel-Plated " Favorite "' Waste, deduct $\$ 7.00$.

For Supply and Waste Fittings, see pages 200 to 207. For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

FLAT BOTTOM.



## $\dagger 645 . \mathrm{C}$.

With 3-inch Enameled Roll Rim and Wide Flat Bottom; Nickel-Plated, Bell Supply Fittings with Imperial Waste; 3/4-inch Iron Pipe size Supply Pipes; Exterior Finished in No. 1 Zinc White and Three Gold Lines.

| Code | Perfumond | Perfumuzi | Perfunard |
| :---: | :---: | :---: | :---: |
| Size, feet | 5 | . ${ }^{1 / 2}$ | 6 |
| Length over rim, inches | 60 | 66 | 72 |
| Length inside, inches. | 54 | 60 | 66 |
| Each, complete as described | \$69.00 | 73.00 | 79.00 |
| Shipping weight crated, lbs........ | 375 | 400 | 425 |
| Shipping measurement, cubic feet | 31 1/2 | $34^{1 / 4}$ | 37 |

If without Exterior Finish and Gold Bands, deduct $\$ 19.00$.
For Exterior Finish and Decorations see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches; roll rim, 3 inches.

+ Carried in San Francisco only.


## H. M. \& S. PORCELAIN ENAMELED BATHS.

FLAT BOTTOM.

$\dagger 646-\mathrm{C}$.

With 3-inch Enameled Roll Rim and Wide Flat Bottom; Nickel-Plated Compression Top Supply Fittings; $1 / 2$-inch Iron Pipe Size Supply Pipes; Nickel-Plated Connected Waste and Overflow, with Rubber Stopper.

| Code | Perfuneel | Perfunekt |
| :---: | :---: | :---: |
| Size, feet.. | 5 | $51 / 2$ |
| Length over rim, inches | 60 | 66 |
| Each, complete as described.. | \$48.50 | 52.50 |
| Shipping weight, lbs.. | 350 | 375 |
| Shipping measurement, cubic | $311 / 2$ | 341/4 |

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches; roll rim, 3 inches.
$\dagger$ Carried in San Francisco only.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

NEW MODEL.



647-C.

With 3 -inch Enameled Roll Rim and Wide Flat Bottom; Drilled for Double Bath Cock, $33 / 8-1 \mathrm{nch}$ center to center of Supplies, Common Overflow and Waste Plug.

| Code | Perfungi | Perfungor | Perfusive | Perfusum | Pergamos |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, feet. | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches | 50 | 56 | 62 | 68 | 74 |
| Length inside, inches. | 44 | 50 | 56 | 62 | 68 |
| Each, as described. | \$28.75 | 29.25 | 32.50 | 36.50 | 42.00 |
| Shipping weight each, pounds | 325 | 350 | 385 | 410 | 450 |
| Shipping measurement, cubic feet.. ......... | 233/4 | $261 / 2$ | 29 | $321 / 2$ | $34^{1 / 3}$ |

For Brass Horn Overflow with Nickel-Plated Strainer and Nickel-Plated Waste Plug with Rubber Stopper, add $\$ 1.00$.

For Supply and IVaste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, $241 / 2$ inches; width over Rim, $301 / 2$ inches; depth inside, 17 inches; height from floor to top of rim, 2.3 inches ; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

"NEW MODEL."

648-c.

With 3-inch Enameled Roll Rim and Extension Rim at Fitting End; Nickel-Plated Top Supply Fittings, with Nickel-Plated Ideal Bath Waste.

| Code. | Pergolino | Pergratos | Pergularum |
| :---: | :---: | :---: | :---: |
| Size, feet | 5 | $51 / 2$ | 6 |
| Length over rim, inches | $631 / 2$ | $691 / 2$ | $751 / 2$ |
| Length inside, inches | 56 | 62 | 68 |
| Each, complete as described | \$59.00 | 64.00 | 69.00 |
| Shipping weight, lbs. | 395 | +20 | 465 |
| Shipping measurement, cubic feet | 29 | $321 / 2$ | $341 / 3$ |

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, $241 / 2$ inches; width over rim, $301 / 2$ inches; depth inside, 17 inches; height from floor to top of rim, 23 inches; roll rim, 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

NEW MODEL.


$650-\mathrm{C}$.

With 3-inch Enameled Roll Rim and Extension Rim at Fitting End; Nickel-Plated Bell Supply Fittings with Ideal Waste.


For Exterior Finish and Decorations, see pages 194 and 195.

Dimensions:
Width inside, $241 / 2$ inches; width over rim, $301 / 2$ inches; depth inside, 17 inches; height from floor to top of rim, 23 inches; roll rim, 3 inches.

## H. M. \& S. SPECIAL PORCELAIN ENAMELED BATHS.

ROUND BOTTOM.


$652-\mathrm{C}$.

With $21 / 2$-inch or 3 -inch Enameled Roll Rim, Round Bottom; Drilled for Double Bath Cock, $33 / 8$ inches center to center of Supplies, Common Overflow and Waste Plug.

| "HICKORY." $21 / 2-1$ INCH ROLL RIM. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code |  | Pericarpe | Perichese | Perichore | Periclem | Pericliter |
| Size, feet |  | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches . |  | 48 | 54 | 60 | 66 | 72 |
| Length inside, inches.. |  | 43 | 49 | 55 | 61 | 67 |
| Each, as described. |  | \$23.25 | 23.75 | 25.00 | 28.50 | 35.00 |
| Shipping weight, lbs. |  | 270 | 300 | 325 | 355 | 400 |
| Shi | ic feet. | 21 1/2 | 233/4 | 26 | $28^{1 / 2}$ | 31 |

"MENLO." 3-INCH ROLL RIM.


For Supply and Waste Fittings, see pages 200 to 207. For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 24 inches; width over rım, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches.

## H. M. \& S. SPECIAL PORCELAIN ENAMELED BATHS.

ROUND BOTTOM.



With $21 / 2$-inch or 3 -inch Enameled Roll Rim, Round Bottom; No. $41 / 2$ Nickel-Plated Fuller Double Bath Cock, with $1 / 2$-inch Iron Pipe Size Offset Supply Pipes; Nickel-Plated Connected Waste and Overflow, with Rubber Stopper and Nickel-Plated Chain.

$$
\text { "HICKORY." } \quad 2 ½-I N C H \text { ROLL RIM. }
$$

Code.

| Perigott | Perigoven | Perigowd | Perigoyle | Perigozam |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{4}$ | $\mathbf{4} 1 / 2$ | $\mathbf{5}$ | $\mathbf{5} 1 / 2$ | $\mathbf{6}$ |
| 48 | 54 | 60 | 66 | 72 |
| 43 | 49 | 55 | 61 | 67 |
| $\$ 31.50$ | 32.00 | 33.25 | 36.75 | 43.25 |
| 280 | 310 | 335 | 365 | 410 |
| $211 / 2$ | $233 / 4$ | 26 | $281 / 2$ | 31 |

"MENLO." 3 -INCH ROLL RIM.
Code. $\qquad$ Perigrace Perigraddo Perigraft Perigraket Perigramme
$\qquad$
Length over rim, inches.. $4 \quad \mathbf{4}^{1} 1 / 2$

Length inside, inches $481 / 2$

Each, complete as described $\$ 32.25$ $\begin{array}{lll}541 / 2 & 601 / 2 & 66^{1 / 2}\end{array}$

Shipping weight, lbs................................. $290 \quad 310 \quad 320 \quad 350$ 430
$\begin{array}{lllllll}\text { Shipping measurement, cubic feet................. } & 213 / 4 & 24 & 261 / 2 & 29 & 311 / 4\end{array}$
If without Nickel-Plated Supply Pipes, deduct $\$ 2.75$.
If without No. $41 / 2$ Nickel-Plated Fuller Cock, deduct $\$ 3.00$.
If without Nickel-Plated Connected Waste and Overflow, deduct \$2.50.
For Supply and Waste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim, 30 inches; depth inside, 17 inches; height from floor to top of rim, $221 / 2$ inches.

## H. M. \& S. SPECIAL PORCELAIN ENAMELED BATHS.

ROUND BOTTOM.



654 - .

With $21 / 2$-inch or 3 -inch Enameled Roll Rim, Round Bottom; Nickel-Plated No. $41 / 2$ Fuller Double Bath Cock, with $1 / 2$-inch Iron Pipe Size Nickel Plated Offset Supply Pipes; Nickel-Plated Favorite Bath Waste.

| Code | Perigrasp | Perigreek | Perigrello | Perigrenad | Perigrepp |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, feet. | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches. | 48 | 54 | 60 | 66 | 72 |
| Length inside, inches | 43 | 49 | 55 | 61 | 67 |
| Each, complete as described. | \$36.00 | 36.50 | 37.75 | 41.25 | 47.75 |
| Shipping weight, lbs.. | 285 | 315 | 340 | 370 | 415 |
| Shipping measurement, cubic feet. | 21 1/2 | 233/4 | 26 | $281 / 2$ | 31 |


| Code | Perigribel | Perigriggo | Perigrod | Perigrosse | Perigrouch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, feet. | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches | $481 / 2$ | $541 / 2$ | $601 / 2$ | $661 / 2$ | $721 / 2$ |
| Length inside, inches | 43 | 49 | 55 | 61 | 67 |
| Each, complete as described. | \$36.75 | 37.25 | 39.75 | 43.50 | 48.00 |
| Shipping weight, pounds | 295 | 315 | 325 | 355 | 435 |
| Shipping measurement, cubic feet. | 213/4 | 24 | $261 / 2$ | 29 | $311 / 4$ |

If without Nickel-Plated Supply Pipes, deduct \$2.75.
If without No. $41 / 2$ Nickel-Plated Fuller Cock, deduct $\$ 3.00$. If without Nickel-Plated Favorite Waste, deduct $\$ 7.00$.

For Supply and Waste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches ; width over rim, 30 inches ; depth inside, 17 inches ; height from floor to top of rim, $221 / 2$ inches.

## H. M. \& S. SPECIAL PORCELAIN ENAMELED BATHS.


$655-\mathrm{C}$.

With 3-inch Enameled Roll Rim, Flat Bottom; Drilled for Double Bath Cock, $33 / 8$-inch center to center of Supplies, Common Overflow and Waste Plug.

$$
\text { "CALIFORNIA." } 3 \text {-INCH ROLL RIM. }
$$



For Brass Overflow Horn with Nickel-Plated Strainer and Nickel-Plated Waste Plug and Coupling with Rubber Stopper and Chain, add $\$ 1.00$.

For Supply and Waste Fittings, see pages 200 to 207.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Width inside, 24 inches; width over rim 30 inches; depth inside, 17 inches; height from floor to top of rim, $22 \mathrm{t} / 2$ inches ; roll rim 3 inches.

## H. M. \& S. PORCELAIN ENAMELED BATHS.

FOR HOSPITALS, ASYLUMS AND SIMILAR INSTITUTIONS



656-C.

With $23 / 4$-inch Enameled Roll Rim; Quick Opening Waste Valve; Wrought Iron Carriage with Swiveled Axle ; Wrought Iron Draw Handle; Rubber Tired Wheels; Exterior Finished in Zinc White.


If without Exterior Finish, deduct $\$ 16.00$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions :

Width inside, 24 inches; width over rim, $29 \frac{1}{2}$ inches; depth inside, 17 inches; height from floor to top of rim, 23 inches ; roll rim, $23 / 4$ inches.

## H. M. \& S. PORCELAIN ENAMELED SITZ BATHS.



With 3-inch Enameled Roll Rim; Nickel-Plated Bell Supply Fittings, with Imperial Waste; $1 / 2$-inch Iron Pipe Size Supply Pipes.
Code. Perimela
Each, complete as described. ..... $\$ 47.00$
Shipping weight, lbs ..... 150
Shipping measurement, cubic feet. ..... $102 / 3$

If with Exterior Finished No. 1 Zinc White with Gold Lines, add $\$ 12.50$.
If with Exterior finished No. 1 Zinc White only, add $\$ 10.50$.

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Front to back over rim, $273 / 4$ inches; width over rim, $281 / 2$ inches; depth inside at waste hole, $101 / 2$ inches; height of front from floor to top of rim, 15 inches; height of back from floor to top of rim 20 inches; roll rim, 3 inches; center to center of supplies, 9 inches.
$\dagger$ Carried in San Francisco only.

## H. M. \& S. PORCELAIN ENAMELED SITZ BATHS.



658-C.

With $21 / 2$-inch Enameled Roll Rim and Extension Arm on side; Nickel-Plated Bell Supply Fittings with Imperial Waste; $1 / 2$-inch Iron Pipe Size Supply Pipes.
Code Periminel
Each, complete as described. ..... $\$ 47.50$
Shipping weight, lbs ..... 200
Shipping measurement, cubic feet ..... $121 / 2$

If with Exterior finished No. 1 Zinc White and Gold Lines, add $\$ 12.50$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Front to back over rim, $271 / 2$ inches; width over rim, 30 inches; depth inside at waste hole, 11 inches; height of front from floor to top of rim, 15 inches; height of back from floor to top of rim, 20 inches; roll rim, $21 / 2$ inches.

## H. M. \& S. PORCELAIN ENAMELED NEW SITZ BATHS.


6.59-C.

With 3-inch Enameled Roll Rim and 5-inch Extension Side Arin; Nickel-plated Bell Supply Fittings with Imperial Waste; 1/2-inch Iron Pipe Size Supply Pipes; Exterior Finished in No. 1 Zinc White.
Code Perinclito
Each, complete as described ..... $\$ 65.50$
Shipping weight, pounds. ..... 200
Shipping measurement, cubic feet ..... 17

If without Exterior Finish, deduct $\$ 10.50$.

For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Front to back over rim, $311 / 2$ inches; width over extension rim, 34 inches; depth inside at waste hole, $10^{1} / 2$ inches; height of front from floor to to top of rim, 15 inches; height of back from floor to top of rim, 23 inches; roll rim, 3 inches; extension rim, 5 inches.

## H. M. \& S. PORCELAIN ENAMELED FOOT TUBS.


660. ${ }^{\text {C. }}$

With $21 / 2$-inch Enameled Roll Rim; Nickel-Plated Bell Supply Fittings with Imperial Waste; 1/2-inch Iron Pipe Size Supply Pipes; Exterior Finished No. 1 Zinc White.
Code.Number$\geq$
Each, complete as described ..... $\$ 42.00$
Shipping weight, pounds ..... 17.5
Shipping measurement, cubic feet ..... 10 I/2

If without Exterior Finish, deduct $\$ 8.00$.
With Gold Lines, add $\$ 1.50$.
For Exterior Finish and Decorations, see pages 194 and 195.

## Dimensions:

Length inside, 20 inches; length over rim, 25 inches; width over rim, 23 inches; width inside, 18 inches; depth inside, $131 / 2$ inches; height from floor to top of rim, 18 inches; roll rim, $21 / 2$ inches.

## BATH TUB DECORATIONS.

The exteriors of all Bath, Sitz and Foot Tubs and Receptors, unless otherwise specified, are unfinished and are painted with one coat of paint only. The process of finishing the exterior is of such a nature that it can be applied to better advantage at the factory, as the casting must be dressed and smoothed perfectly, which requires special facilities ; and after each coat of the finish is applied it must be oren baked and hand-rubbed before the next succeeding coat is put on.

The number of coats varies from twelve to sixteen for the No. 1 finish and from six to ten for the No. 2 finish. After the exterior is entirely finished, if desired, gold lines or border decorations are added.

Gold bands or lines can be put on either No. 1 or No. 2 finish. Borders can be furnished on No. 1 finish only.

The No. 1 finish will be furnished on all orders for exterior finish unless otherwise specified, but can be furnished Ivory or Cream White if desired.

On the following page are shown a few of our regular border designs, which can be furnished in any color; we are also prepared to furnish, on reasonably short notice, special borders to match tiling or interior decorations.

Prices for Exterior Finish On Porcelain Enameled Baths.

| No. |  | Code | On Foot Tubs and Receptors | Code | $\begin{gathered} \text { On Sitz } \\ \text { Tubs } \end{gathered}$ | Code | $\begin{aligned} & \text { On Bath } \\ & \text { Tubs } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Zinc White Finish. | Perineptos | \$8.00 | Periploca | \$10.50 | Perkaline | \$16.00 |
| 2 | Zinc White Finish. | Perinfame | 6.00 | Periplum | 7.75 | Perlaire | 12.00 |
| * | H. M. and S. Zinc White Finish. | Peringrata |  | Periptere |  | Perlartig | 15.00 |
|  | Gold Bands or Lines.. | Perinthum | 1.50 | Perisabor | 2.00 | Perlatrix | 3.00 |
| * | H. M. \& S. Gold Bands or Lines...... | Perinvito |  | Periscole |  | Perlbirn | 5.00 |
| 1 | Finish with 662-c Fleur-de-Lis Border | Periodico | 11.50 | Perissad | 16.75 | Perlegunt | 23.00 |
| 1 | Finish with 664-c Greek Border........ | Periòdiste | 11.50 | Perissent | 16.75 | Perlette | 23.00 |
| 1 | Finish with 666-c Festoon Border.... | Periodo | 13.50 | Peristilo | 19.75 | Perlevis | 27.00 |
| 1 | Finish with 668-c Flower Border... | Periodure | 15.50 | Peristyle | 22.75 | Perlfarbe | 31.00 |
| 1 | Finish with 670-c Poppies Border...... | Peripheral | 16.50 | Peritanza | 24.25 | Perlgrau | 33.00 |
| 1 | Finish with special border to match tiling, etc. | Periplast | 16.50 | Perjuraba | 24.25 | Perlgries | 33.00 |

*H. M. \& S. Zinc White Finish, unlike No. 1 and No. 2 finish, is not baked on, there being no facilities on this coast. It is, however, a beautiful, smooth white hard finish.

Prices for Exterior Finish on "Ideal" Solid Porcelain Baths.


Any Porcelain Bath may be decorated with regular or special designs. Prices upon application.

## BATH TUB DECORATIONS.

(3) (2)

662-C. Fleur-de-lis.


664-C. Greek Design.


666-C. Festoon Design.


668-C. Flower Design.


670-C. Poppies Design.

## STEEL CLAD BATH TUBS．

STEEL SHELL LINED INSIDE



6゙シー（．

With 3－inch Varnished Oak Rim，cut for Double Bath Cock， $33 / 8$ inches center to center of Supplies；Nickel－Plated Connected Waste and Overflow with Chain and Plug；Exterior finished in Sky Blue，relieved with Gold Bronze．

STEEL CLAD WITH NICKEL－PLATED COPPER LINING．


STEEL CLAD WITH NICKELOID LINING．


## Dimensions：

Width inside， 23 inches；width outside， 28 inches；depth inside， $171 / 2$ inches；height from floor to top of rim， 22 inches．

For Supply and Waste Fittings，see pages 200 to 207 ．

## H. M. \& S. STEEL BATH TUBS.

```
WHITE ENAMEL INSIDE BAKED ON.
```



With 3-inch Varnished Oak Rim, cut for Double Bath Cock, $33 / 8$ inches center to center of Supplies; Nickel-Plated Connected Waste and Overflow, with Chain and Plug. Exterior finished in Sky Blue, relieved with Gold Bronze.

| Code. | Perlthee | Perluete | Perlustro | Perlutura |
| :---: | :---: | :---: | :---: | :---: |
| Size, feet | $41 / 2$ | 5 | $51 / 2$ | 6 |
| Length over rim, inches. | $531 / 2$ | $591 / 2$ | 65 | $711 / 2$ |
| Length inside, inches.. | 481/2 | $541 / 2$ | 60 | $661 / 2$ |
| Each. | \$19.50 | $\bigcirc 0.50$ | 21.50 | 24.50 |
| Shipping weight, lbs.. | 72 | 76 | S0 | 86 |
| Shipping measurement, cubic feet.. | $221 / 2$ | 2.5 | $271 / 2$ | 30 |

For Supply and Waste Fittings, see pages 200 to 207 .

## Dimensions :

Width inside, 23 inches; width orer rim, 28 inches; depth inside, $17 \frac{1}{2}$ inches; height from floor to top of rim, 22 inches.

## STEEL BATH TUBS.

## WHITE ENAMEL INSIDE AND OVER R!M BAKED ON.




#### Abstract

With 3-inch Pressed Steel Roll Rim; Cut for Double Bath Cock $33 / 8$ inches center to center of Supplies; Nickel-Plated Connected Waste and Overflow with Chain and Plug. Pressed Steel Legs; Exterior is finished with one coat of dark metalatic paint.


| Code | Perlweiss | Permacer |
| :---: | :---: | :---: |
| Size, feet. | 5 | $51 / 2$ |
| Length over rim, inches | 60 | 66 |
| Each. | \$24.00 | \$25.00 |
| Shipping weight, pounds | 70 | 75 |
| Shipping measurem | 25 | $27^{1 / 2}$ |

## Dimensions :

Width inside, 23 inches; width over rim, 28 inches; depth inside, $171 / 2$ inches; height from floor to top of rim, 21 inches.

For Supply and Waste Fittings see pages 200 to 207.

+ Carried in San Francisco only.


## H. M. \& S. ZINC BATH TUBS.

REDWOOD BOXES LINED WITH No. 10 ZINC.

CUT FOR OVERFLOW AND WASTE PLUG.



With $11 / 2$-inch Brass Waste Plug and Chain and 6 inches $11 / 2$-inch Lead Pipe, put in, add $\$ 1.00$.

With 3-inch Fancy Brass Overflow Strainer and 1-inch Elbow for Lead Pipe, put in, add $\$ 1.00$.

With Galvanized Iron Pipe, Connected Waste and Overflow, Brass Waste Plug and Rubber Stopper, Brass Orerflow Strainer and Bath Chain, Outlet Connection, $11 / 2-\mathrm{inch}$ Female Iron Pipe Thread, add $\$ 5.10$.

For Supply and Waste Fittings, see pages 200 to 207.

## Dimensions:

Width inside, 22 inches; width outside, 24 inches; depth inside, $173 / 4$ inches; height from floor to top, $193 / 4$ inches; center of outlet to outside of end, $53 / 4$ inches.

Special styles and sizes of Zinc Bath Tubs to order. Prices on application.

## COMPRESSION DOUBLE BATH COCKS.

BRASS. NICKEL-PLATED.



690 - C.
$5^{1 / 2}$-inch Centers. Tail Pieces for $1 / 2$-inch Lead Pipe.

| Code... | Permesso |
| :---: | :---: |
| Number. | J |
| Each | \$3.50 |
| Weight each, lbs.. | $31 / 2$ |
|  |  |



691-C.
$33 / 8$-inch Centers. Threaded for $3 / 4$-inch Iron Pipe. Tail Pieces for $1 / 2$-inch Lead Pipe.


One in a box.

## No. $4^{1 ⁄ 2} / 2$ FULLER DOUBLE BATH COCKS.

BRASS. NICKEL-PLATED.


$33 / 8$-inch Centers. Threaded for $3 / 4$-inch Iron Pipe. Tail Pieces for $\sqrt[3]{4}$-inch Lead Pipe.

## Code

[^5]
## No. 7 FULLER DOUBLE BATH COCKS.

## BRASS NICKEL-PLATED


696.C.
$33 / 8$-inch Centers, Threaded $3 / 4$-inch Iron Pipe. Tail Pieces for $5 / 8$-inch Lead Pipe.
Code.Permotas..........Yo. 7-Couplings for $5 / 8$-inch Lead Pipe. Weight, each, $33 / 8 \mathrm{lbs} \ldots \ldots \ldots \ldots \ldots$...........Each, $\$ 2.25$Permunda......... No. 7-Couplings for $1 / 2$-inch Iron Pipe, Male. Weight, each, $33 / 8 \mathrm{lbs} \ldots \ldots$. . ". 2.40Fermutant........No.7-Nickel-Plated all over. Couplings $3 / 8$-inch Iron Pipe, Female.2.50
Permuteur........Yo. 7-No Couplings, with Nickel-Plated Locknuts. Weight, each, $33 / 8 \mathrm{lbs}$.. ..... 2.25One in a box.

## FULLER DOUBLE BATH COCKS.

## IMPROVED PATTERN.



697 - C.
$33 / 8$-inch Centers. With China Index Handles and Tail Pieces for Lead Pipe.
Code. Permux
Each ..... $\$ 4.00$ ..... 5
Weight, each, lbs
Weight, each, lbs

FULLER DOUBLE BATH BIBBS.

698.C.
$33 / 8$-inch Centers. Threaded for $3 / 4$-inch Iron Pipe. Tail Pieces for $3 / 4$-inch Lead Pipe.
Code. Permuzz
Each. ..... $\$ 2.50$
Weight, each, lbs. ..... 3

## BATH COCK COUPLINGS.



700-C.

FOR LEAD PIPE ROUGH BRASS.

Code. $\qquad$ Pernalto
Size, inch
Per pair. $\qquad$


FOR IRON PIPE MALE. ROUGH, NICKEL-PLATED.

## Code.

Size, inch
Per pair
$\qquad$ Pernarios 1/2
$\$ 0.60$


FOR IRON PIPE, FEMALE. FINISHED NICKEL-PLATED.
$\begin{array}{lc}\text { Code.................... } & \text { Pernavigo } \\ \text { Size, inches............. } \\ \text { Per pair ................ } & \$ 0.80\end{array}$

## COMPRESSION BATH COCK.

```
WITH SUPPLY PIPES.
```

No. 3 Nickel-Plated Compression Double Bath Cock with $1 / 2$-inch Iron Pipe size, Nickel-Plated Offset Supply Pipes.


Center to center for Offset Supply Pipes, $53 / 4$ inches.
Center to center for Straight Supply Pipes, $33 / 8$ inches.

706-C.


## FULLER BATH COCK.

WITH SUPPLY PIPES.

No. $41 / 2$ Nickel-Plated Fuller Double Bath Cock with 1/2-inch Iron Pipe size, Nickel-Plated Offset Supply Pipes.

| Code | .. Perniger <br> With Offset Pipes | Pernigros With Straight Pipes |
| :---: | :---: | :---: |
| Price complete. | \$5.75 | 5.50 |
| Weight, lbs. | $71 / 2$ | $71 / 2$ |

Center to center for Offset Supply Pipes, 53/4 inches.
Center to center for Straight Supply Pipes, $33 / 8$ inches.

## FULLER DOUBLE BATH BIBB.

```
WITH SUPPLY PIPES.
```

Nickel-Plated Fuller Double Bath Bibb with $1 / 2$-inch Iron Pipe Size, Nickel-Plated Offset Supply Pipes.

| Code | Perniss | Permistay |
| :---: | :---: | :---: |
|  | With Offset Pipes | With Straight Fipes |
| Price complete | \$5.00 | 4.75 |
| Weight, lbs.. | $61 / 2$ | $61 / 2$ |

Center to center for Offset Supply Pipes, at floor, $53 / 4$ inches.
Center to center for Straight Supply Pipes, at Hoor, $33 / 8$ inches.

## BATH COCK SUPPLY PIPES.


Permitort.....Straight. Nickel-Plated. $1 / 2$-inch Iron Pipe Size. Weight, per pair, $31 / 4 \mathrm{lbs} \ldots .$. Per pair, $\$ 2.50$
Pernisame ...Offset. Nickel-Plated. $1 / 2$ " " " " " " " $31 / 4$ ".... " 2.75

Pernoblis.....Offset. Nickel-Plated. $1 / 2$ " " " " With Stop Valve, $1 / 2$-inch I. .
P. by $7 / 8$-inch Slip. Weight, per pair, 5 lbs ........................................... " 4.15

Pernoctar......Straight. Annealed Tubing, same as 712-C without Slip Joint Connection. Weight, per pair, 1 lb
Pernuzzo.......Straight. Annealed Tubing, same as $712-\mathrm{C}$ with $1 / 2$-inch I. P. by $3 / 4$-inch O.
D. Supply Cock. Same as shown in 272 -C. Weight, per pair, 2 lbs
2.70

Plate 712-C may be easily bent to any desired offset.

713.C.

## SLIP JOINTS.

BRASS. NICKEL-PLATED.
For Basin and Bath Supplies.

| Code | Perodisse | Perolino | Peromates | Peromull | Peronate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches........ | $\begin{aligned} & 3 / 8 \text {-in. I. P. } \\ & \text { by } \\ & 1 / 2 \text {-in. Tube } \end{aligned}$ | $\begin{aligned} & 1 / 2 \text {-in. I. P. } \\ & \text { by. } \\ & 1 / 2 \text {-in. Tube } \end{aligned}$ | $\begin{aligned} & 1 / 2-\text { in. I. P. } \\ & \text { by } \\ & 5 / 8 \text {-in. Tube } \end{aligned}$ | $\begin{aligned} & 1 / 2 \text {-in. I. P. } \\ & \text { by } \\ & 3 / 4 \text {-in. Tube } \end{aligned}$ | $\begin{aligned} & { }^{3 /-\mathrm{in} .} \text { I. P. } \\ & \text { by } \end{aligned}$ |
| Each | \$0.30 | 40 | . 45 | 50 | . 50 |
| Weight each, lbs. | 1/8 | $1 / 4$ | $1 / 4$ | 14 | $1 /$ |



## NICKEL-PLATED CONNECTED WASTE AND OVERFLOW.

ADJUSTABLE.

Cast Brass Strainer, Pluy and Nuts. Nickel-Plated Chain and Rubber Stopper.
Code. ..... Peroole
Size, inches ..... $13 / 3$
Each. ..... \$2.50
W'eight each, pounds ..... $31 / 2$

This W'aste will fit Tubs that vary from $41 / 2$ to $61 / 2$ degrees, which covers over $90 \%$ of the Enameled Tubs on the Market.

## One in a box.

## - 14 - C .



## FAVORITE NICKEL-PLATED BATH WASTE.

## ADJUSTABLE

| Code | Peropaco |
| :---: | :---: |
| Each. | \$7.00 |
| Weight each, pounds | $6{ }^{1 / 4}$ |

One in a box.
For Rim Flanges, add $\$ 1.00$.
For China Name Plate, add $\$ 0.50$.

## COMMON OVERFLOW AND WASTE FITTINGS.



BRASS. OVERFLOW HAS NICKEL-PLATED STRAINER. WASTE HAS RUBBER STOPPER.

Code Peroram

Per set \$1.00
Weight, per set, lbs $\qquad$


716-C.

## BATH TRAPS VENTED.

BRASS NICKEL-PLATED.

To set on the floor with inlet for connected waste and overflow or exterior bath waste.

Tube at inlet of trap is $11 / 2$-inch outside diameter.

These traps are so made that drain cocks may be put in.

| Code. | Perorell |
| :---: | :---: |
| Inch | $11 / 2$ |
| Each | \$6.50 |
| Weigh |  |

One in a box.

## BATH TRAPS.

BRASS NICKEL-PLATED
$11 / 2$-inch Connected Waste and Overflow with Rubber Stopper and Vented "S" Trap.

Code Perorude

Each, as described $\$ 6.50$
Weight, each, lbs One in a box.

If without vent, deduct $\$ 0.50$.
If without Connected Waste, deduct $\$ 2.50$.


717-C.



719-C.

## NICKEL-PLATED BATH BELL SUPPLY AND WASTE.

ADJUSTABLE.

Supply Pipes $1 / 2$-inch Iron Pipe size.

| Code | Peroscele |
| :---: | :---: |
| Number | 5 |
| Each. | \$17.00 |
| Weight each, pounds. | $171 / 2$ |

For $3 / 4$-inch Iron Pipe size Supplies, add $\$ 1.00$
For Tub Rim Flanges, add $\$ 2.00$
For China Name Plates, add $\$ 1.25$
For Unions on Supplies at floor, add $\$ 1.00$


# †NICKEL-PLATED BATH BELL SUPPLY AND WASTE. 

ADJUSTABLE.

Supply Pipes $3 / 4$-inch Iron Pipe size. For hot and cold fresh water and hot and cold salt water.


Numbe 55

Each 23

For China Name Plates, add $\$ 2.00$
For $3 / 4$-inch Unions on Supply Pipes at floor add $\$ 2.00$.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers.

## PORCELAIN FLUSHING RIM BIDETS.


$\dagger$-21-C.
Solid Porcelain Flushing Rim Pedestal Bidet, Flushing Rim and Seat Integral; Nickel-plated Brass Compression Supply Fittings for hot and cold water, for the Spray or Douche, and NickelPlated Supply Valve for the Flushing Rim; Nickel-Plated Waste and Overflow.
Code Perotot
Each complete as described ..... $\$ 2.50$
Weight each, lbs ..... 65

Water may be retained in the bowl of the Bidet to nearly the height of the flushing rim, and by lifting the waste the water will run from the bowl as fast as supplied. By a single turn of the handle water may be immediately switched from the Bidet to the flushing rim.

## Measurements:

Width outside at largest part, $141 / 2$ inches; width outside at smallest part, $121 / 2$ inches; length over all, $221 / 2$ inches; height from floor, 16 inches; from floor to center of connection, 8 inches; from center to rear of earthen ware, $71 / 2$ inches.

The space required for the proper setting of this Bidet, including fixtures, will not exceed $28 \times 23$ inches.

+ Carried in San Francisco only.


## "IDEAL" SOLID PORCELAIN SHOWER BATH RECEPTORS.


:2ロ-c.

Square pattern Roll Rim Solid Porcelain Shower Bath Receptor, Glazed Pure White inside and outside with Waste in center; Nickel-Plated Strainer and Floor Flange.

| Code. | Peroxide | Perpacabo |
| :---: | :---: | :---: |
| Numbers | 1 | 2 |
| Outside dimensions, inches | 36x36x9 | $42 \times 42 \times 9$ |
| Each, complete as shown | \$60.00 | 85.00 |

Shipping weight, lbs ..... 310 ..... 420
Shipping measurement, cubic feet ..... 12 ..... $14^{1 / 2}$

# "IDEAL" SOLID PORCELAIN SHOWER BATH RECEPTORS. 



Corner Pattern Roll Rim Solid Porcelain Shower Bath Receptor, Glazed Pure White inside and outside with Waste in center; Nickel-plated Strainer and Floor Flange.
Code Perparce
Each, complete as shown ..... $\$ 105.00$
Shipping weight, lbs ..... 450
Shipping measurement, cubic feet ..... 18

## Dimensions:

Outside length on sides, $331 / 2$ inches; length from corner at back to front, 49 inches; depth, 9 inches.

Above can be furnished with any Shower or Needle Bath.

# "MONARCH" SOLID PORCELAIN SHOWER BATH RECEPTORS. 


726.C.

Round Pattern Roll Rim Solid Porcelain Shower Bath Receptor, Glazed Inside and Outside with Waste in Center; Nickel-Plated Strainer and Coupling.
Code
Each, complete as described ..... $\$ 80.00$ ..... 112.50Weight each, lbs
$\qquad$

## "MONARCH" SOLID PORCELAIN SHOWER BATH RECEPTORS.



728-C.

Round Pattern Roll Rim Solid Porcelain Shower Bath Receptor, Glazed Inside and Outside, to Finish Against Wall, with Waste in Center; Nickel-Plated Strainer and Coupling.

| Code | Perpastum | Perpaucos |
| :---: | :---: | :---: |
| Size, inches. | 36 | 42 |
| Each, complete as described.. | \$93.00 | 125.50 |
| Wreight each, lbs. | ........ |  |

[^6]
## PORCELAIN ENAMELED SHOWER BATH RECEPTORS.


i30-c.

With Enameled Roll Rim; Nickel-Plated Strainer and Coupling.


For Exterior Finish and Decorations see pages 194 and 195.

## Dimensions:

36-inch size: Width over rim, 36 inches; length over rim, 36 inches; depth at waste hole, 6 inches; roll rim, $11 / 2$ inches. 42 -inch size: Width over rim, 42 inches; length over rim, 42 inches; depth at waste hole, 8 inches; roll rim, 2 inches.

Above Receptors can be furnished with any of the Shower or Needle Baths shown on following pages.

## NEEDLE AND SHOWER BATHS.

NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.


756-C.
Nickel-Plated Combination Needle and Shower Bath with Check Valves in Supplies; Italian Marble Stall, 6 feet 6 inches high, 3 feet 2 inches square; back and sides $7 / 8$ inch; Countersunk Base, $11 / 2$ inch. Right and Left Sides polished both sides.

Code
Perpetior
Perpetose Complete less Marble Stall, Floor Slab and Strainer.
For Nickel-Plated Waste Strainer and Coupling add $\$ 5.00$.
For Supply Pipes to Floor, add $\$ 10.00$.
Weight, complete as described, 1355 lbs.; weight, less marble, 175 lbs.

## Measurements:

Center to center of supplies, $181 / 2$ inches, center of supplies to floor, $541 / 2$ inches; Supplies, $3 / 4$ inch; diameter of shower head, 8 inches; diameter of needle shower, 38 inches; extreme height, $9 t$ inches; distance from wall to center of shower head, $201 / 2$ inches.

In Orders and Specifications give Plate Numbers.

NEEDLE AND SHOWER BATHS.
NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.

758.c.

Nickel-Plated Combination Needle and Shower Bath, with Check Valves in Supplies; Italian Marble Stalls, 6 feet 6 inches high, 3 feet 2 inches square; Back and Sides, $7 / 3$ inch; Countersunk Base, $1 \frac{1}{2}$ inches. Right and Left Sides, polished both sides.

Code
Perpetro Complete as described............................................................................. $\$ 170.50$
Perpetune Less Marble Stall, Floor Slab and Strainer.
For Nickel-Plated Waste Strainer and Coupling add $\$ 5.00$.

$$
\text { For Nickel-Plated Supplies to Floor add } \$ 10.00 \text {. }
$$

Weight complete as described, 1270 pounds; less marble, 90 pounds.

## Measurements:

Center to center of supplies, $181 / 2$ inches; center of supplies to floor, $541 / 2$ inches; supplies, $3 / 4$ inch; diameter of shower head, 8 inches; extreme height, 94 inches; distance from wall to center of shower head, $201 / 2$ inches.

## NEEDLE AND SHOWER BATHS.

NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.


760-C.
Nickel-Plated Combination Needle and Shower Bath, with Mixing Chamber and Thermometer, with Check Valves in Supplies; $11 / 2$ inch Countersunk Italian Marble Floor Slab; 4 feet by 3 feet 9 inches.

Code
Perpigner Complete as described ........................................................................... $\$ 170.00$
Less Floor Slab................................................................. .............................
For Nickel-Plated Curtain Ring and Curtains add $\$ 30.00$. For Supply Pipes to floor add $\$ 10.00$.
For Nickel-Plated Waste Strainer and Coupling add $\$ 5.00$.
Weight, complete as described, 537 pounds; less floor slab, 200 pounds. One in_a case.

## Measurements :

Center to center of supplies, $123 / 4$ inches; center of supplies to floor, $511 / 2$ inches; supplies, $3 / 4$ inch; diameter of shower head, 8 inches; diameter of needle shower, 38 inches; extreme height, 93 inches; distance from wall to center of shower head, $201 / 2$ inches.

NEEDLE AND SHOWER BATHS.
NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.



762-C.
Nickel-Plated Combination Needle and Shower Bath, with Check Valves in Supplies; $11 / 2$ inch Countersunk Italian Marble Floor Slab, 4 feet by 3 feet 9 inches.

## Code

Perplaceo
Complete as described.....
Perpladom Complete less Floor Slab
100.00

For Nickel-Plated Waste Strainer and Coupling, add $\$ 5.00$.
For Nickel-Plated Supply Pipes to Floor, add $\$ 10.00$.
Weight complete as described, 517 pounds; weight less Marble Slab, 180 pounds.
One in a case.

## Measurements :

Center to center of supply pipes, 10 inches; center of supply pipes to floor, $541 / 2$ inches; supply pipes, $3 / 4$ inch; diameter of shower head, 8 inches; diameter of needle shower, 38 inches; extreme height, 93 inches; distance from wall to center of shower head, $201 / 2$ inches.

## SHOWER BATHS.

```
NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.
```


$764 \cdot \mathrm{C}$.
Nickel-Plated Shower with Ball Joint to Regulate Angle of Spray, $3 / 8$ inch Supplies and $1 / 2$ inch Mixing Column.

Code.................................................................................................................... Perplesso
Complete as described...................................................................................... $\$ 18.00$
Weight each, lbs.
One in a case.

## Measurements :

Center to center of supplies, $91 / 4$ inches; diameter of shower head, 5 inches; extreme height, 97 inches; distance from wall to center of shower head, 8 inches.

## SHOWER BATHS.

NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.

$765-\mathrm{C}$.
Nickel-Plated Ring Shower with Shampoo Attachment. The Ring is perforated, and when operated a shower bath can be taken without wetting the head of the bather.

Code
Perpleted
Complete as described $\$ 26.00$
Weight each, lbs

## Measurements :

Center to center of supplies, 10 inches; diameter of shower ring, 20 inches; extreme height, 87 inches; distance from wall to center of shower ring, 18 inches.

## SHOWER BATHS.

NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING.


766-C.
Nickel-Plated Shower, with Shampoo Attachment, Curtain Ring and Duck Curtain; $11 / 2$ inch Countersunk Italian Marble Floor Slab, 27 inches by 27 inches; $1 / 2$ inch Supplies and $3 / 4$ inch Mixing Chamber.

[^7]
## Measurements :

Center to center of supplies, $9 \frac{1}{4}$ inches; diameter of shower head, 8 inches; extreme height, 97 inches; diameter of curtain ring, 24 inches; distance from wall to center of shower head, $141 / 2$ inches.

## SHOWER BATHS.


768.C.

Nickel-Plated Shower, with $11 / 2$-inch Countersunk Italian Marble Floor Slab, 27 inches by 27 inches; $1 / 2$-inch Supplies and $3 / 4$-inch Mixing Column.

Code
Perpolio
Complete as described
$\$ 37.50$
Perpopish Less Marble Floor Slab
For Nickel-Plated Waste Strainer and Coupling add $\$ 5.00$.
Weight complete as described, 154 pounds; weight less marble slab, 40 pounds.
One in a case.

## Measurements:

Center to center of supplies, $91 / 4$ inches; diameter of shower head, 8 inches; extreme height, 97 inches; distance from wall to center of shower head, $141 / 2$ inches.

## SHOWER BATHS.

```
NICKEL-PLATED. IRON PIPE S!ZE BRASS TUBING.
```


\%80-C.
"Niagara" Nickel-Plated Shower Bath, with Check Valves in Supply Pipes; Shampoo Sprinkler; White Duck Curtain.
Code. Perponte
Complete as described ..... $\$ 30.00$
W'eight each, lbs ..... 50

## Measurements :

Center to center of supply pipes, 11 inches; supplies, $1 / 2$-inch iron pipe size.

# BRACKET SHOWER BATH. SUNBURST SHOWER BATH. <br> HEAVY BRASS. NICKEL-PLATED. 



771-C.
With 7-inch Shower Head attached to Bracket with Flange for fastening to wall, and Rubber Tubing with Bulb Connection to fit any faucet.

HEAVY BRASS. NICKEL-PLATED.


773-C.

With 7-inch Shower Head provided with Arms to hold Curtain, $5 / 8$-inch Supply Pipe and 6 feet of best Rubber Tubing with Rubber Bulb Connection to fit any faucet 6 feet x 6 feet Rubber Back Curtain.

This is a portable Shower and a special feature is its compactness. The rods or arms holding curtain can be unscrewed and the whole fixture when taken apart, including curtain, pack in a box $22 x 12 x 3$ inches.

Code
Perpoque
$\$ 5.00$
Each, complete as described
$\qquad$
Shipping weight, lbs $\qquad$
Shipping measurement, cubic feet......

Code
Perppent
Each, complete as described....... $\$ 14.00$
Shipping weight, lbs.
Shipping measurement, cubic feet...
One in a box.

## PORTABLE SHOWER BATHS.

FRAME MADE OF SEAMLESS BRASS TUBE. NICKEL-PLATED. RUBBER CURTAIN. MAY BE ATTACHED TO ANY TUB.


752-c.
Nickel-Plated Brass Frame and 5-inch Shower with Vent; 21-inch Nickel-Plated Curtain Ring; White Rubber Curtain and Curtain Snaps; Rubber Cap; Rubber Tubing with Attachment for Bath Faucet; Nickel-Plated Curtain Hook and Chain; Nickel-Plated Screws.

| Code. | Perpressi |
| :---: | :---: |
| Each, complete as described.. | \$15.00 |
| Weight each, lbs.. | 25 |
| Shipping measurement each, cubic feet... | 15/6 |

One in a case.
The Portable Shower as shown above, is the latest design and construction of Portable Showers. It is easily put up and removed, can be packed in your trunk when you go away for your summer vacation, and is a boon to those who live in rented houses.

## SHOWERS.



Nickel-Plated Shower, with 24-inch Curtain Ring and Snaps, for attaching to Bath Cock or Fancet.

| Code. | Perprim | Code | Perpulsi |
| :---: | :---: | :---: | :---: |
| Each . | \$6.50 | Each. | \$12.50 |
| Weight each, lbs. | 18 | W'eight each, lbs. | 30 |

Extreme height, 36 inches; diameter of shower head, 8 inches; distance from wall to center of shower head, $141 / 2$ inches.

Extreme height, 50 inches; diameter of shower head, 8 inches; distance from wall to center of shower head, $141 / 2$ inches.

## SHOWERS.

```
BRASS NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING
```


788.c.

;80-C.

Nickel-Plated Shower, with Self-Closing V Valve, Chain and Ring Pull.

Nickel-Plated Shower, with Self-Closing V alve, Chain and Ring Pull.

| Code................... ..................... | Perpulsum | Code. | Perpunctus |
| :---: | :---: | :---: | :---: |
| Each | \$8.50 | Each. | \$8.50 |
| Weight each, lbs.. | 15 | Weight each, lbs....................... | 15 |

Diameter of shower head, 8 inches; distance from wall to center of shower head, 16 inches; supply, $1 / 2$ inch.

Diameter of shower head, 8 inches; distance from ceiling to bottom of shower head, 18 inches; supply, $1 / 2$ inch.

## SHOWERS.

```
BRASS NICKEL-PLATED. IRON PIFE SIZE BRASS TUBING
```



Nickel-Plated Ring Shower with Self-Closing Valve; Chain and Ring Pull.
Code Perputes
Each ..... $\$ 12.00$
Weight each, lbs ..... 24


Nickel-Plated Ring Shower with Self-Closing Valve; Chain and Ring Pull.
Code. Perquam
Each ..... $\$ 12.00$
WYeight each, lbs ..... 24

Diameter of ring, 20 inches; distance from ceiling to bottom of ring, 23 inches; supply, $1 / 2$ inch.

## SHAMPOOS.

```
BRASS NICKEL-PLATED. IRON PIPE SIZE BRASS TUBING. FOR BATHS, RUBBING SLABS, ETC.
```



786-C.

Weight each, lbs

Nickel-Plated Shampoo with Rubber Bound
Sprinkler.

Extreme height, 53 inches; supplies, $3 / 8$ inch.


Nickel-Plated Shampoo with Rubber Bound Sprinkler.

Code Perquotono
Each.................................................. $\$ 10.00$
Weight each, lbs..................................... 11

## OVERHEAD NEEDLE SHOWERS.

## BRASS POLISHED AND NICKEL-PLATED.



No. 40. Body is in two parts.

No. 30. Body is in one piece.


| Code. | Perrazas | Perrengo |
| :---: | :---: | :---: |
| Diameter of face, in. | $61 / 2$ | 8 |
| Iron pipe female thread, in..... | 1/2 | 3/4 |
| Each | \$2.20 | 2.50 |
| Weight each, lbs................. | 1 | $15 / 8$ |


| Code | Perrepes | Perrepunt |
| :---: | :---: | :---: |
| Diameter of face, | $61 / 2$ | 8 |
| Iron pipe female thread, in. | $1 / 2$ or $3 / 4$ | $1 / 2$ or $3 / 4$ |
| Each | \$3.40 | 4.00 |
| Weight each, lbs | $11 / 2$ | 2 |

One in a box.
One in a box.

These showers give a fine spray, which has a slightly irritative and yet very pleasant effect on the skin.

The valve in the showers allows the water to drain quickly.
No. 40 is in two parts, to allow of cleaning, should the small holes in the face of the shower become clogged. The screw joint is the same for all sizes.
$\dagger$ Carried in San Francisco only.

## OVERHEAD TULIP SHOWERS.

## POLISHED BRASS NICKEL-PLATED.


$\dagger 792.1^{\prime}$.

With Removable Face.

OVERHEAD SHOWERS.

POLISHED BRASS NICKEL-PLATED.

$\dagger 793 .{ }^{\circ}$.

With Corrugated Face.
Code. ..... Perrimos
Number. ..... 45
Diameter, inches ..... $71 / 4$
Depth, inches ..... $13 / 4$
Iron pipe female thread, inch ..... 1/2
Each ..... $\$ 1.50$
Weight each, lbs. ..... $11 / 4$

## SHOWER HEADS.


794.C.

Plain.


795-C.
Tubular.

PLAIN SHOWER HEADS—i9t-C.

. Perrodetis
Perrogare
+5
$3 / 8$
.75
$3 / 4$

| Perrogites | Perroquet | Perruche |
| :---: | :---: | :---: |
| $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| $1 / 2$ | $1 / 2$ | $1 / 2$ |
| .90 | 1.10 | 1.30 |
| 1 | 1.14 | $13 / 4$ |

One in a box.
† TUBULAR SHOWER HEADS-795-C.
Code.
Perrumpo
$\mathbf{t}$
$3 / 8$
$\$ 1.05$
$1 / 2$
e in a box.
nches in diameter
AND
CKET
INTS.

One in a box.
Special showers up to 18 inches in diameter made to order.

BALL JOINT SPRINKLER HEADS.<br>BRASS NICKEL-PLATED.<br>REMOVABLE FACE.


+796 - $\mathbf{C}^{\circ}$.
Adjustable; Diameter, 4 inches; $1 / 2$-inch Female Iron Pipe Thread.
Code ...................... Persapien
Each........................ $\$ 5.75$

BALL AND SOCKET JOINTS.
BRASS NICKEL-PLATED


+ 797 - $\mathrm{c}^{\circ}$.
Adjustable, with Iron Pipe Threads.
Code............... Persbaar Persboom Size, inch.......... 1/2 3/4 Each .............. \$1.50 2.00 Weight, ea., lbs, 15/16 14/16

| Persalsum | Persaluto | Persancte |
| :---: | :---: | :---: |
| $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| $1 / 2$ | $1 / 2$ | $1 / 2$ |
| 1.60 | 2.00 | 2.50 |
| 1 | $11 / 4$ | $13 / 4$ |


| Perrygine | Persalsum |
| :---: | :---: |
| $\mathbf{5}$ | $\mathbf{6}$ |
| $3 / 8$ | $1 / 2$ |
| 1.35 | 1.60 |
| $3 / 4$ | 1 |
| eter made to order. |  |

## BALL JOINT SHOWER HEADS.

EXTRA HEAVY CAST BRASS NICKELPLATED. REMOVABLE FACE.

$\dagger$-98.C.
Adjustable; Diameter, 6 inches; $1 / 2$-inch Female Iron Pipe Thread.
$\qquad$
Each $\$ 8.25$
Weight each, lbs 4

+ Carried in San Francisco only.


800 - C.

$\dagger$ Carried in San Francisco only.

## SHAMPOO SPRAYS.

BRASS NICKEL-PLATED.
With Shank for $3 / 8$-inch Rubber Tubing.
Code. ..... Perscindo
Number ..... it
Diameter of face, inches ..... 21/4
Each ..... $\$ 0.15$
Weight per dozen, lbs ..... $3 / 4$Loose.
†BATH SPRAYS.
BRASS NICKEL-PLATED
With Detachable Shank and Rubber Ring. Shank for$3 / 8$-inch Rubber Tubing.
Code Perscisso
Number ..... 70
Diameter of face, inches ..... $21 / 2$
Each ..... $\$ 0.45$
Weight per dozen, lbs ..... 23 4

Twelve in a box.

## SURE GRIP BULBS.

NICKEL-PLATED BRASS AND HIGHEST GRADE RUBBER.

For connecting Bath Sprays or Shower Rings to any Pipe, Tube or Faucet, from three-eighths inch to seveneighths inch diameter inclusive.

It holds securely and is far superior in every way to any other bulb made.

The Rubber in these Bulbs is guaranteed against cracking, splitting or hardening for ten years.

Code............................................................. Perscitos
Each
$\$ 0.45$
IVeight per dozen, lbs $\qquad$

## KELLY SHOWER RINGS.

BRASS NICKEL-PLATED.<br>Heary.



S03.C.
Shank for $3 / 8$-inch Rubber Tubing.

| Code | Perscruto |
| :---: | :---: |
| Diameter, inches. | $\dagger 10$ |
| Each. | \$3.00 |
| Weight each, lbs. | 1 |

NECK SHOWERS.
NICKEL-PLATED BRASS.


80t-C.
Shank for $3 / 8$-inch Rubber Tubing.


## BATH SPRAYS.

## WITH 5 FEET OF $3 / 8-1 N C H$ BEST QUALITY SMOOTH RUBBER TUBING.



All metal work is brass, nickel-plated. The Sprays are 3 inches in diameter, with rubber buffer rings. The Rubber bulbs will grip faucets up to and including $3 / 4 \mathrm{inch}$.


One in a wooden box.
$\dagger$ Carried in San Francisco only.


MASSAGE BATH SPRAY.
SOFT WHITE RUBBER.
Brush and Spray Combined.

| Code. | Persilouve |
| :---: | :---: |
| Number | 1 |
| Length, inches. | 60 |
| Diameter of spray, inches................. | 31/4 |
| Each. | \$3.00 |
| Weight each, lbs... | $11 / 8$ |

Code. ilouve
解............................................
Length, inche
$31 / 4$
Each............................................... \$3.00
Weight each, lbs............................. 1 ¹/8
One in a box.

+ 806.C.
The Massage Bath Spray is constructed so that it can be used as a Brush and Spray at the same time and attached to any faucet.

The Brush consists of soft rubber bristles. . At the base of each bristle is a small hole which allows the water to flow past them, making a spray, the force of which can be regulated by the pressure of water. By using this spray you can begin taking your bath just as soon as you turn on the water, as it is unnecessary to have any water in the tub, thereby saving a great deal of time.

The Brush and Spray can be easily detached from the metal back, thoroughly cleaned and replaced. It is excellent to use for shampooing as it massages the head and rinses the hair. The rubber brush being of a soft, velvety nature, positively does not scratch the skin, as is the case with a bristle brush, and is more cleansing. It merely causes the blood to circulate freely, creates a glow and puts the pores of the body in a natural and healthy condition.

## SHOWER RINGS.

With 5 feet of $3 / 8$ inch Best Quality Rubber Tubing.


807-C.
All metal work is brass, nickel-plated. The rings are 12 inches in diameter. The bulbs will grip faucets up to and including $3 / 4$ inch.


[^8]
## SHOWER CURTAIN SNAPS.

BRASS NICKEL-PLATED.


$\dagger$ + $808 .{ }^{\text {c }}$.
$11 / 2 \times 21 / 2$ inches.
Code. Persimile
Each $\$ 0.08$
Weight per dozen, lbs $\qquad$ 3/16 One hundred in a box.

## SHOWER BATH CURTAINS.

RUBBER OR DUCK.


CURTAIN RODS WITH FLANGES AND RINGS.
BRASS NICKEL-PLATED.

$+810 \cdot \mathrm{C}$.

| Code. | Persolana | Persolve | Personaba | Personage |
| :---: | :---: | :---: | :---: | :---: |
| Length, feet. | 3 | 4 | j | 6 |
| Each. | \$4.50 | 6.00 | 7.50 | 9.00 |

We can furnish above any desired size or length to order.

## BATHING CAPS.

## CURTAIN RINGS.

BRASS NICKEL-PLATED.


|  | $\dagger$ 811-C. |  |
| :---: | :---: | :---: |
| Code | .... Personize <br> Cloth, Rubber Lined | Personne <br> Pure Rubker |
| Each. | \$0.30 | 50 |

Twelve in a box.
† Carried in San Francisco only.

## SOAP DISHES.

FOR WASH STANDS.
EXTRA HEAVY BRASS NICKEL-PLATED

$\dagger \mathbf{8 2 0} \mathbf{C}$.
43/4 $\times 33 / 4$ inches.

| Code. | Perspectif |
| :---: | :---: |
| Each. | \$0.65 |
| Weight per dozen, pounds | $31 / 8$ |


$\dagger$ 829.C.
$5 \times 4$ inches.

$\dagger$ 82t-C.
5 x 4 inches.


821-C. $4^{3} 4 \times$. $3^{3 / 4}$ inches.

Code
Perspirate
Each.
$\$ 0.65$
Weight per dozen, pounds
One-half dozen in a box.


823-C.
$5 \times 4$ inches.
Code.
Perspomp
Each ................................................ $\$ 1.10$
W'eight per dozen, pounds.. .............. 7


825-C.
5 x 4 inches.
Code Pertectum
Each ............................................. $\$ 1.10$
Weight per dozen, pounds.
One-sixth dozen in a box.

Screws packed with all fixtures which require them.
$\dagger$ Carried in San Francisco only.

## SOAP DISHES.

## FOR THE. WALL.

EXTRA HEAVY BRASS NICKEL-PLATED.

| Code. | Pertendero | Code... | Pertentas |
| :---: | :---: | :---: | :---: |
| Each.......................................... | \$1.40 | Each. | \$0.60 |
| Weight per dozen, lbs. $\qquad$ One-sixth dozen in box. | 93/4 | Weight per dozen, lbs........................ One-half dozen in a package. | $33 / 4$ |



Plate 829 -C shows how Plate $828-\mathrm{C}$ can be instantly removed from bracket to facilitate cleaning, but cannot be accidentally displaced.

$\dagger 830 . \mathrm{C}$.
Dishes may be removed.
Code ..... Pertichi
Each ..... $\$ 3.00$
Weight each, lbs ..... $11 /$One-quarter dozen in a box.

Screws packed with all fixtures which require them.
$\dagger$ Carried in San Francisco only.

SOAP DISHES.
BRASS NICKEL-PLATED

$\dagger$ \$3.5-6.
Cast Brass Nickel-Plated. $4 \frac{3}{4} \times 3$ inches.
Code

Each.
$\qquad$ Perstaret $\$ 1.50$
Weight per dozen, lbs
Two in a box.

$+837 . \mathrm{C}$.
Cast Brass Nickel-Plated.


$\dagger \mathbf{8 3 6 - 1 .}$
With China Tray.

Weight per dozen, lbs


83s.c.
Soap Dish and Chain Stay, with Threaded Rod and Nuts to fasten to Marble Slab.
Code.
Perstructo
Size, inches
$4^{3} \times 1 \times 3 / 4$
Each
$\$ 1.40$
Weight per dozen, lbs...................... 83/4

Six in a box.

+539 - ${ }^{\circ}$.
Stamped Brass. $41 / 2 \times 3$ inches.
Code.................................... Persubtile
Each.............................................. $\$ 0.25$
Weight per dozen, lbs ................... $31 / 4$

$+840 . \mathrm{C}$.
Stamped Brass. $41 / 2 \mathrm{x} 4$ inches.
Code Persultem
Each ............................... ............... \$0. 30
Weight per dozen, lbs. $31 / 4$

Twelve in a box.
Screws included with all fixtures.
$\dagger$ Carried in San Francisco only.

## SOAP DISHES.

## EXTRA HEAVY BRASS NICKEL-PLATED.

Flexible Loop Hangers adjustable to any size Roll Rim Bath Tub.


## SOAP AND TUMBLER HOLDERS.

## CAST BRASS NICKEL-PLATED.


$\dagger$ © 5 5. C .
For Corner Lavatory. Height, 6 inches.
$\qquad$
Each
Pertolero
$\$ 2.00$
$13 / 8$

$\dagger$ 846.C.
For Flat Back Lavatory. Height, 6 inches.
Code.
Pertracta
Each................................................ $\$ 2.00$
Weight each, lbs................................ $13 / 8$

One in a box.

$+\mathbf{8 . 5 0 .}$ (.
Cast Brass Nickel-Plated. Diameter, 3 inches.
Code
Pertreche
$\$ 1.20$
Each $3 / 4$

8.51.C.

Seamless, with Perforated Bottom. Diameter, 3 inches.
Code.
Pertrepido

Weight per dozen, lbs....................... 7
Six in a box.
Screws included with all fixtures.
$\dagger$ Carried in San Francisco only.

TOOTH BRUSH AND TUMBLER HOLDERS.
ALL BRASS NICKEL-PLATED.

$853-\mathrm{C}$.
With removable Soap Dish. See 829-C.
Extreme height, $101 / 4$ inches; extreme width, $81 / 2$ inches; Soap Dish, $5 x+$ inches.


In Orders and Specifications give Plate Numbers.

## TOOTH BRUSH AND TUMBLER HOLDERS.

BRASS NICKEL-PLATED.


Extreme height, 11 1/2 inches; extreme width, $81 / 2$ inches.
Code Pertunda
Each ..... $\$ 5.25$Weight each, pounds3

One in a box.

Soap Dish is removable (see plate $\mathbf{8 2 9} \mathbf{- C}$, page 22. .)
The Fingers on the left hand Bracket are adjustable to hold any package of standard make of dentifrice.

Screws included with all fixtures which require them.
$\dagger$ Carried in San Francisco only:

## TOOTH BRUSH AND TUMBLER HOLDERS.

BRASS, NICKEL-PLATED.


Extreme height, $71 / 2$ inches; extreme width, $31 / 2$ inches.


## TOOTH BRUSH HOLDERS.


$\dagger \mathbf{8 6 0 - C}$.
Cast Brass Nickel-Plated.


862-C.



All Tumbler Holders are Seamless and have Perforated Bottoms.

Code............................................... Perulaire


Weight each, lbs .............................. 21/4
Each
$\$ 1.25$

One in a box.
Weight per dozen, lbs
$191 / 2$
Screws included with all fixtures.
$\dagger$ Carried in San Francisco only.

## SPONGE OR BATH BRUSH HOLDERS.



Wall Sponge Holder, 53/4 x63/4x3 inches.
Code. Perunges
Each ..... $\$ 1.50$
Weight per dozen, pounds. ..... $123 / 4$Two in a box.


Tub Sponge or Brush Holder, $53 / 4 \times 63 / 4 \times 3$ inches.
Code Perurbane
Each ..... $\$ 1.50$
Weight per dozen, pounds ..... 155/8Six in a box.

Screws included with all fixtures which require them.
$\dagger$ Carried in San Francisco only.

## SOAP AND SPONGE HOLDERS.

BRASS NICKEL-PLATED.

$\dagger$ 870-C.
Sponge Holder, $53 / 4633 / 43$ inches. Soap Holdder, 5 x 4 inches.
Each ..... $\$ 2.50$
Weight per dozen, lbs ..... 213/4

† 871-C.
Cast Brass Nickel-Plated.
Sponge Holder, $61 / 2 \times 51 / 2$. Soap Holder, $51 / 4 \times 31 / 2$. Length of Straps, $81 / 2$ inches.
Code.............................................. Perusin
Each.
$\$ 3.20$
Weight per dozen, lbs........................ 191/2
One in a box.

$\dagger$ S73-C.
With Detachable Soap Cup, which can be placed at either end of Holder, thereby making them either right or left. Soap Holder, $41 / 2 \times 31 / 4$ inches. Sponge Holder, $7 \times 41 / 2$ inches.
Code.
Perustum
Each............................................. \$2. 00
Weight per dozen, lbs........................ 11
Six in a box.

SPONGE OR BATH BRUSH HOLDERS.

$+875-\mathrm{C}$.
Adjustable to any Roll Rim Bath Tub.
Code........................................................................................................... Perutile
Each .............................................................................................................. $\$ 1.25$
Weight per dozen, lbs....................... ................................................................... 143/4
Six in a box.

$\dagger \mathbf{8 7 6}$ C.
Combination Sponge and Soap Holder. Soap Holder removable and may be attached to either end.

$\dagger$ Carried in San Francisco only.

## SPONGE HOLDERS.



CAST BRASS NICKEL-PLATED.

Oval, with Bent Tube Bracket. $51 / 2$ inches by $61 / 2$ inches.

One in a box.

BRASS NICKEL-PLATED.

## WHISK-BROOM HOLDER.

BRASS NICKEL-PLATED.


$\dagger \mathbf{8 8 0} \mathbf{- c}$.
Width, 4 inches.
Pervade
Code
Each $\$ 1.60$

Weight each, lbs 1

## TOOTH POWDER RECEPTACLE. <br> One in a box. <br> Code <br> Each <br> Weight each, lbs

Pervagor
$\$ 1.60$

## COMB AND BRUSH HOLDERS.



Dimensions, $10^{1 / 2} \mathrm{x} 4^{1 / 4} \times 2$.

Weight per dozen, lbs......................................................................................... 112/3
Six in a box.

$\dagger 885 . \mathrm{C}$.
CAST BRASS NICKEL-PLATED
Dimensions, $91 / 2 \times 33 / 4 \times 13 / 4$ inches.
Code. ..... Perveho
Each. ..... $\$ 2.20$
Weight per dozen, lhs ..... $131 / 2$Two in box.

+887 - 1 .

## ELK WASH CLOTH HOLDERS.

## CAST BRASS NICKEL-PLATED

| Code. | Pervelles |
| :---: | :---: |
| Each. | \$2.00 |
| Weight each, lb.. | 1 |

One in a box.
Prongs are blunt and will in nowise injure cloth. Also a handsome Tooth Brush Holder.

Screws included with all fixtures.

+ Carried in San Francisco only.

+888.C.


## WALL TOWEL BASKETS.

BRASS. NICKEL-PLATED.
Sanitary, Handsome, Useful.
Height, 18 inches; width, $111 / 2$ inches; depth, 8 inches.
Code
Pervemade
Each
\$8.50
Weight each, lbs
5
One in a package.
$\dagger$ Carried in San Francisco only.

|  | $\dagger \text { + } 991 \cdot \mathrm{C}$ |  |  |
| :---: | :---: | :---: | :---: |
| Code.. |  | Pervestigo | Pervetus |
| Length, inches. | .......... | 12 | 18 |
| Each.. |  | \$3.50 | 4.00 |
| Weight each, lbs. |  | $21 / 8$ | $23 / 8$ |

One in a package.

## HAND RAIL AND TOWEL BAR.

## BRASS NICKEL-PLATED. JOINTS BRAZED. <br> Bars Tested to 600 Pounds.



892-C.
Bar 1 inch diameter.
This bar placed above the bath tub will prevent many accidental falls, and will be a great aid to heavy, sick or aged. A superb fixture, and very desirable for bath towels.

| Code | Pervolvo | Perzik | Pesadelo | Persadez |
| :---: | :---: | :---: | :---: | :---: |
| Length, inches. | 30 | 36 | $\dagger 42$ | 48 |
| Each. | \$3.50 | 4.00 | 4.50 | 5.00 |
| Weight each, lbs | $21 / 2$ | $27 / 8$ | $31 / 4$ | $33 / 4$ |

Screws included with all fixtures.
$\dagger$ Carried in San Francisco only
In Orders and Specifications give Plate Numbers and Sizes.

## TOWEL BARS.

## BRASS NICKEL-PLATED.

Made of extra heavy brass tubing. Brackets cast brass, highly finished. Extends $31 / 2$ inches from wall.


894-C.
Forty inches of towel space. Length, 20 inches.
Code........................................................................................................................................................
Each ................................................................................................................... $\$ 1.75$
Weight per dozen, lbs........................................................................................... $151 / 2$
Six in a package.

$895-\mathrm{C}$.
Sixty inches of towel space, Length, 20 inches.
Code................................................................................................................ Pesavano
Each................................................................................................................. \$2. 50
Weight per dozen, lbs.
Six in a package.

## ROLL TOWEL BARS.

## BRASS NICKEL-PLATED.

The roll is made of heavy brass tubing, 1 inch in diameter, the flanges are brazed on, and the pintles riveted into the flanges. The wall brackets are strong and simple, with 1 -inch ball ends.


897-C.
For roller towels. Length, 20 inches.
Code. Pescaban
Each ..... $\$ 1.50$
Weight per dozen, lbs. ..... $161 / 2$Six in a package.Screws included with all fixtures.

[^9]
## TOWEL BARS.

## BRASS NICKEL-PLATED.



900 - C.
Diameter of bar, $1 / 2$ inch.

| Code. <br> Length, inches | $\begin{gathered} \text { Pescados } \\ \dagger \mathbf{1 2} \end{gathered}$ | Pescantes $\dagger \mathbf{1 4}$ | $\begin{aligned} & \text { Pescario } \\ & +\mathbf{1 6} \end{aligned}$ | Pescatore 18 | Pescetto 24 | Pescheria 30 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each... | \$0.50 | . 55 | . 60 | 65 | . 85 | 1.00 |
| Weight per dozen, lbs..................... | $37 / 8$ | $41 / 8$ | $41 / 2$ | $45 / 8$ | 7 | 8 |

Six in a box.


901-C.
Diameter of bar, $1 / 2$ inch.

| Code <br> Length, inches. | $\begin{aligned} & \text { Pescocudo } \\ & \mathbf{2 0} \end{aligned}$ | $\begin{gathered} \text { Pescozon } \\ \mathbf{2 4} \end{gathered}$ | $\begin{gathered} \text { Pescuno } \\ \mathbf{3 0} \end{gathered}$ | Pesebrol $\dagger 36$ |
| :---: | :---: | :---: | :---: | :---: |
| Each. | \$1.10 | 1.20 | 1.35 | 1.50 |
| Weight per dozen, lbs. | $121 / 2$ | 14 | 16 | 21 |

Six in a box.

$\dagger 902-\mathrm{C}$.
Diameter of bar, $3 / 4 \mathrm{inch}$.

| Code. | Pesepelle | Pesereste |
| :---: | :---: | :---: |
| Length, inches | 30 | 36 |
| Each.. | \$2.00 | 2.25 |
| Weight each, lbs | 2 | 3 |

Six in a package.
Screws included with all fixtures.
$\dagger$ Carried in San Francisco only.

## TOWEL SHELVES.

```
BRASS NICKEL.PLATED.
```


904.1.

Length, 20 inches.
$\qquad$
Weight each, pounds...................................................................................................... $31 / 2$
Two in a package.

$\dagger$ 905-C.
With Towel Bar.
Length, 20 inches; width, $6 \frac{1}{2}$ inches.
$\qquad$
E $\$ 3.60$
Weight each, pounds.
One in a package.

$\dagger$ 906. C.
Length, 20 inches; width, $61 / 2$ inches.
Code....................................................................................................................................................
Each................................................................................................................................ \$3. 00
Weight each, pounds.............................................. ......................................................... 2 ¹/4
One in a package.
Screws included with every fixture.
$\dagger$ Carried in San Francisco only.

## UNIVERSAL SWING TOWEL BARS.

POLISHED STEEL. HANDSOMELY NICKEL-PLATED. :-16 INCH ROD

One Arm.


907C.
Code.Number11
Length of arm, inches ..... 12
Per dozen ..... \$0.7.Weight per dozen, lbs.Two Arms.


90SC.


Three Arms.


909C.
Code
Number ..... 3.1
Length of arms, inches ..... 12
Per dozen ..... $\$ 1.75$Weight per dozen, lbs.年

## SWING ARM TOWEL BARS.



Twelve in a box.


BRASS NICKEL-PLATED.
Made of Extra Heavy half-inch Tube fourteen inches long. Ball ends. The Pivot upon which the Bars swing is a Heavy Steel Rod firmly secured to the Brackets. It is fastened to the wall by four screws. Strong, Sanitary and Symetrical.


Six in a box.


This fixture is a solid Bar of tough polished white Opaque Glass, each end being accurately fitted to a Heavy Cast Bracket, Nickel-Plated. It is Elegant and Substantial, and the use of Glass is in line with the most approved sanitary practice.

| Code Length, inches | Pessimes 18 | Pessula 24 | $\begin{gathered} \text { Pessute } \\ \ddagger \mathbf{3 0} \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Each | \$2.50 | 3.00 | 4.00 |
| Weight each, lbs | $21 / 4$ | 3 | $33 / 4$ |

One in a box.
Screws included with all fixtures.
$\dagger$ Carried in San Francisco only. $\ddagger$ Carried in Los Angeles only.

## PLATE GLASS LAVATORY FIXTURES.

## WITH NICKEL-PLATED BRONZE BRACKETS AND SCREWS. NO HOLES IN GLASS. ALL EDGES ARE GROUND AND POLISHED.



918-C.

## adJustable plate glass towel bars.

| Code. | Pestaneo | Pestard | Pestarol |
| :---: | :---: | :---: | :---: |
| Numbers. | 0 | 1-24 | $\ddagger \mathbf{1 - 3 0}$ |
| Length, inches. | 12 | 24 | 30 |
| Each. | \$3.00 | 4.00 | 5.00 |
| Weight each, lbs | $31 / 2$ | 7 | $81 / 2$ |



919-C.

## EXTRA HEAVY ADJUSTABLE PLATE GLASS TOWEL BARS.

| Code. | Pestartig |
| :---: | :---: |
| Number | 12 |
| Length, inches | 24 |
| Each. | \$12.00 |
| Weight each, lbs | 13 |



ROUND GLASS TOWEL BARS.
$3 / 4$-inch solid round glass polished.
Code..
ength, inches .....
Each. .....  00
Weight each, lbs ..... 5

For cutting plate $\mathbf{9 2 0}$ - $\mathbf{C}$ shorter than above, add $\$ 0.50$ each.
$\ddagger$ Carried in Los Angeles only.

## PLATE GLASS LAVATORY FIXTURES.

WITH NICKEL-PLATED BRONZE BRACKETS AND SCREWS. NO HOLES IN GLASS. ALL EDGES ARE GROUND AND POLISHED.

922-c.
ADJUSTABLE PLATE GLASS TOWEL SHELF.
ऽ inches wide, $2 \pm$ inches long.
Code. ..... Pestdamp
Number. ..... 4
Each ..... $\$ 7.50$
Weight each, pounds ..... 11 $1 / 2$

adjustable plate glass towel shelf and bar. Shelf 6 inches wide, 24 inches long.
Code ..... Pestfleck
Number ..... 6
Each. ..... $\$ 10.00$
Weight each, pounds. ..... $13^{1 / 2}$

adjustable plate glass towel shelf and rod. Shelf, 6 inches wide. Rod, $3 / 4$-inch diameter. Length, 24 inches.
Code ..... PesthaftNumber7
Each. ..... $\$ 12.00$
Weight each, pounds. ..... 14

## OPAL GLASS SHELVES.

## TRIMMINGS BRASS, NICKEL-PLATED.



One in a box.

## PLATE GLASS SHELF COMBINATIONS.

Trimmings Brass, Nickle-Plated. Plate Glass $3 / 8$-inch thick. Length of Shelf, 24 inches; width of Shelf, 5 inches; diameter of bar, $1 / 2$ inch ; length of bar, 18 inches.


One in a box.


Has removable Soap Dish. See plate $\mathbf{8 2 9 - C}$, page 23 .

[^10]
## GUARD RAILS.

```
FOR ALL TYPES OF GLASS SHELVES. BRASS, NICKEL-PLATED
```



Cut shows Rail in position on Shelf.

| Code Fits shelves, inches | Pestmask 20x5 | $\begin{aligned} & \text { Pestmelt } \\ & \mathbf{2 4 x 5} \end{aligned}$ | Pestmice $30 \times 5$ |
| :---: | :---: | :---: | :---: |
| Each | \$1.50 | 1.75 | 2.00 |
| Weight earh, lbs. | 5/8 | $3 / 4$ | 7/8 |

Screws included with all fixtures.
$\dagger$ Carried in San Francisco only.

## HOOKS.

## BRASS, NICKEL-PLATED.




933 - C.
Height, 6 inches. Code Each
$\qquad$ Peststoff
$\$ 0.50$
Code
Each.

Weight per doz., lbs.... $31 / 2$ Twelve in a box.

Height, $91 / 2$ inches; width, $101 / 2$ inches.
Pestono $\$ 2.25$
Weight per doz., lbs
Six in a box.

936 -.
Spray or Razor Strop Hook.

| Code....................... | Petale |
| :--- | :---: |
| Each................... | $\$ 0.30$ |
| Weight per doz.. lbs. | 2 | Twelve in a box.


$+934 . \mathrm{C}$.
Height, $33 / 4$ inches. Code Each.

## Pestzeit

$\$ 0.40$
$25 / 8$ Twelve in a box.

$\dagger \mathbf{9 3 5}$ - ${ }^{\circ}$.
Height, 6 inches.
Code. $\qquad$ Pesunho $\$ 0.65$ 6 Weight per doz., lbs... Six in a box.

$\dagger$ Carried in San Francisco only.

## TOILET PAPER BOXES.

BRASS NICKEL-PLATED, WITH AUTOMATIC FINGERS TO HOLD PAPER UPRIGHT.

$\dagger 940-\mathrm{C}$.
Box, $5^{1 / 2}$ inches wide, $71 / 4$ inches high, $21 / 4$ inches thick.
Code
Each.
Weight per dozen, lbs.

Petasonem
\$1.25
12

$\dagger$ 941-C.
Box, $71 / 4$ inches wide, $51 / 2$ inches high, $21 / 4$ inches thick.

Code
Petauris
Each $\$ 1.25$
Weight per dozen, lbs....................... 12

Two in a box.


942 - .

Box, $7^{1 / 4}$ inches long, 3 inches high, $5^{1 / 2}$ inches wide.

Code.

Petechial

\$1.35

12

$\dagger 943$ -
EXTRA HEAVY.
Box, $71 / 4$ inches wide, $51 / 2$ inches high, $21 / 4$ inches thick.
Code............................................... Petegift
Each
$\$ 1.35$
Weight per dozen, lbs....................... 17

Two in box.
$\dagger$ Carried in San Francisco only.

+947 - .

## ROLL PAPER HOLDERS.

BRASS, NICKEL-PLATER.
Extra Heavy, Roll with Ball Finish; locks into Bracket, but may be instantly removed. Width of Roll, 5 inches.

Code
Peteman
Each.............................................................. \$1.00
Weight per dozen, lbs.
Six in a box.
Screws included with all Fixtures.
$\dagger$ Carried in San Francisco only.
(

## ROLL PAPER HOLDERS.

BRASS NICKEL-PLATED.


$\dagger 945-\mathrm{C}$.
Width of Roll, 5 inches.
Code
Each Petekind

Eacight per dozen, Ibs....................................
Weight per dozen, lbs
$\$ 0.40$

Twelve in a box.


948 . .
Roll is Enameled, and Springs in.
Width of Roll, 5 inches.
Code. Petendum

Each $\$ 0.50$
Weight per dozen, lbs
Six in a box.

† 946-C.
IVidth of Roll, 5 inches; Frame, $61 / 2$ inches.
Code .............................................. Petelinos
Each.................................................. \$1. 35
Weight per dozen, lbs.......................... 12
One in a box.

$949-\mathrm{C}$
Extra Heavy Brass Roll and Flanges, all Nickel-Plated. Width of Roll, 5 inches.
Code............................................... Peterstag
Each......... ............... ........................ \$1.50
Weight per dozen, lbs........................ 113/8
Three in a box.

## FRENCH PLATE GLASS MIRRORS.

```
NICKEL-PLATED BRASS FRAMES. BEVELED EDGES.
```


$\dagger \mathbf{9 5 0} \mathbf{C}$.
Triple Adjustable Combination Mirror. On Hardwond Backs. Diameter of Mirrors, 11 inches. Dimensions folded, $14 \times 131 / 2$ inches.


## OVAL ADJUSTABLE MIRROR.



ROUND ADJUSTABLE MIRROR.
NICKEL-PLATED SWING BRACKET.
Code. PetoffeNumber9
Diameter of mirror, inches ..... 11
Length of arm, inches ..... 9
Each. ..... $\$ 4.50$
Weight each, lbs. ..... $43 / 4$
$\dagger$ Carried in San Francisco only.

## FRENCH PLATE GLASS MIRRORS.

EXTRA HEAVY SEAMLESS NICKEL-PLATED BRASS FRAMES WITH BEADED EDGES. METAL BACKS. INTERCHANGEABLE SCREW EYES, ALLOWING MIRROR TO BE HUNG VERTICALLY OR HORIZONTALLY.



953-C.
Round. 11/4-Inch Bevel.


$\dagger 954 . \mathrm{C}$.
Oblong. 1-Inch Bevel.

| Cod | Petoulier | Petrary |
| :---: | :---: | :---: |
| Size, inches. | 16x24 | 18x30 |
| Width of frame, inches. | 7/8 | 7/8 |
| Each | \$14.00 | 16.00 |
| Weight each, lbs | 191/2 | 31 1/2 |


$955-\mathrm{C}$.
Oval. 1-Inch Bevel, 7/8-inch Frame.

| Code. | Petrejus | Petrifiant | Petrinos |
| :---: | :---: | :---: | :---: |
| Size, inches. | $13 \times 20$ | 16x24 | $\dagger$ ¢1x30 |
| Each | \$11.00 | 14.00 | 23.00 |
| Weight each, lbs. | 19 | 21 | 25 |

+ Carried in San Francisco only.


## ADJUSTABLE OVAL MIRRORS.

EXTRA HEAVY, SEAMLESS, NICKEL-PLATED BRASS FRAMES, WITH BEADED EDGES.
METAL BACKS. BALL AND SOCKET JOINT.


956-C.

Sectional View:
Oval-1 inch Bevel, $7 / 8$ inch Frame. Back, Braces and Wall Brackets Nickel-Plated.

| Code | Petrisses | Petrobics |
| :---: | :---: | :---: |
| Size, inches. | $13 \times 20$ | 16x24 |
| Each. | \$19.00 | 22.00 |
| Weight each | 28 | 30 |

One in a Box.

These Mirrors are secured to a Wall Bracket extending six inches from wall, with Universal Ball and Socket Joint, which allows the Mirror to be turned to any desired position or angle, and there maintains it by friction only:

Very desirable for bath room, dressing room or boudoir.
Screws packed with all fixtures which require them.

In Orders and Specifications give Plate Numbers.

## MATCH SCRATCHES AND HOLDERS.

## CAST BRASS NICKEL-PLATED.



Cigar Rest and Match Scratch. 4 x 4 inches.



Maṭch Holder and Scratch. $3^{1 / 4} \times 5^{1 / 4}$ inches.

$\dagger 961$ - C.
Match Scratch. 4x2 $1 / 4$ inches.

$\dagger 962 . \mathrm{C}$.
Cigar Rest. Width, $35 / 8$ inches.

| Code. | Petromele | Code.. | Petrosal |
| :---: | :---: | :---: | :---: |
| Each. | \$0.25 | Each ..... ...................................... | \$0.35 |
| Weight per dozen, lbs . | $11 / 8$ | Weight per dozen, lbs...................... | $21 / 2$ |

Six in a box.

## Screws included with all fixtures.

$\dagger$ Carried in San Francisco only.

## VITREOUS CHINA BATH ROOM FITTINGS.


$\dagger \mathbf{9 7 0 - C .}$
Soap Holder.
Length, $71 / 2$ inches; height, $61 / 2$ inches.
Code
Each
Petruccio

Weight each, lbs.
$\$ 1.90$
$\qquad$

$+972-\mathrm{C}$.
Toilet Paper Holder.
Length, $61 / 2$ inches; height, $81 / 2$ inches.
 $\dagger$ Carried in San Francisco only.
 Sponge Holder.

Length, $8 \frac{1}{4}$ inches; height, 7 inches.
Code
Petschaft
Each
$\$ 2.50$
Weight each, lbs


Whisk-Broom Holder.
Width, $61 / 2$ inches; height, 10 inches.
Code.
Pettishly
Each ............................ . ................. $\$ 1.90$
Weight each, lbs.

## VITREOUS CHINA BATH ROOM FITTINGS.


$\dagger 974 . \mathrm{C}$.
Brush and Comb Holders.
Length, 12 inches; height, $61 / 2$ inches.
Code.
Each.
Pettorale
$\$ 3.75$
Weight each, lbs.


Match Holders.
Width, $31 / 4$ inches; height, 4 inches.
Code.
Petulance
Each.
$\$ 1.00$
Weight each, lbs.

$\dagger$ 976.C.
Croton Sets for Lavatories.
Mouth Ewer, Shaving Mug, Covered Soap Dish, Tooth Brush Vase.
Code.
Petulanza
Per set
Weight per set, lbs
$\dagger$ Carried in San Francisco only.

## BATH TUB SEATS.

## NICKEL-PLATED TRIMMINGS. RUBBER SHEATHED SUPPORTS.

Finished with Two Coats of Finest Spar Varnish.

$\dagger 978 . \mathrm{C}$.
Adjustable for $21 / 2$-inch to $33 / 4$-inch rims.


979-C.



## BATH STRAPS, HEAD RESTS OR SEATS.

NO. 16 GAUGE NICKEL-PLATED BRASS CLIPS. EXTRA HEAVY WEB STRAP.

Adjustable.
Code.
Peuplade
Each ........................................................... \$2.00
Weight each, lbs
2
Length of strap, 42 inches; width, 5 inches.
One in a package.
$\dagger$ 980.C.

+ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers.


## "EMPIRE" BATH TUB SEATS.



981-C.

This seat is of solid highly polished oak. The brackets are nickel-plated and highly polished; the brackets slide in grooves on the under side of seat, and are held in position by thumb screws; the upper ends curve over and are securely riveted to suitable shaped oval pieces which are nickelplated; the under side of the oval pieces or rests are entirely covered with sheet rubber, thus preventing the least scratching or marring of the finest tub.
Code ..... Peuplett
Width, inches ..... $51 / 2$
Length, inches ..... 191/2
Each. ..... \$2.50
Weight each, lbs ..... 43/4

## CORK BATH MATS.

## FOR THE BATH ROOM FLOOR.


$\dagger$ 982.C.
Cork, as is well known, is a perfect non-absorbent, and for that reason is always dry and warm, with a texture that gives a velvet-like surface agreeable and satisfying to the touch. Made of Refined Shaved Cork, under hydraulic pressure. Soft and smooth, yet firm. Indestructable. No amount of water or soap will injure them in any way.

| Code | Peupliers |
| :---: | :---: |
| Size, inches | $32 \times 18$ |
| Each | \$5.00 |
| Weight each, pounds.. | $61 / 4$ |

One in a box.

## CORRUGATED RUBBER BATH TUB MATS.

## FOR THE BOTTOM OF BATH TUBS.

Made of best quality corrugated rubber, $1 / 8$-inch thick, protected by cloth on the under side, which gives it strength and durability. Its wearing qualities are such that under ordinary circumstances, it is almost indestructable.

Being made of soft rubber it is flexible and conforms to the shape of the bottom of the bath tub and prevents accidents by slipping etc.

$\dagger 983 . \mathrm{C}$.

| Code. | Pezuna | Pezzuola |
| :---: | :---: | :---: |
| Size, inches | $12 \times 30$ | $12 \times 36$ |
| Each. | \$2.10 | 2.40 |
| Weight each, pounds | 31 | 36 |

One-half dozen in a package.
$\dagger$ Carried in San Francisco only.

## KNICKERBOCKER FOUNTAIN BRUSHES.

PURE INDIA RUBBER, WITH NICKEL-PLATED EXTENSION HANDLE.
Flexible. Sanitary. Self-Cleansing. Durable. Indispensable.
Each little rubber tooth is hollow and when the water is turned on many hundreds of little streams are flowing at the same time. Superior to sponges, cloths, bristle brushes, etc., in that it never gets dry, will not tear, does not irritate the skin and is always sweet, clean and sanitary. May be attached to any bath cock and a uniform temperature may be maintained.


One in a box.

FOR THE

BATH, SHOWER, SHAMPOOING, MASSAGE.


Connected to a hot and cold water faucet ready for use.


This illustration shows the flexibility of the Knickerbocker Fountain Brush.

+ Carried in San Francisco only.


## SECTION 4.

SOLID PORCELAIN LAVATORIES.
ITALIAN MARBLE LAVATORIES.
TENNESSEE MARBLE LAVATORIES.

> PORCELAIN ENAMELED LAVATORIES
> AND LAVATORY FIXTURES.


Holbrook, Merrill \& Stetson,
INCORPORATED.

## LAVATORIES AND LAVATORY FIXTURES.

Ideal Solid Porcelain Lavatories are the best that the potter's skill can produce. Of elegant design and finish, the very best quality as regards material and durable beyond comparison. Besides the styles in the following pages, we are in a position to quote on a great number of different designs.

Marble Lavatories-quality of marble and its finish should not be overlooked. All of our marble is selected stock, deeply countersunk, carefully finished and highly polished. All the Marble Parts and the Metal Supply and Waste Fittings are fitted and adjusted to each Lavatory before shipment, thus avoiding loss of time and trouble when setting in place.

Porcelain Enameled Lavatories have no cracks or crevices, they are all in one piece. Like Solid Porcelain and Marble, these Lavatories are hard, smooth and non-absorbent although lighter in weight. The designs are graceful and every fixture is finished in such a manner as only long experience and careful attention can accomplish. Every Lavatory is carefully examined by us before shipment.

Lavatory Fixtures are Brass Nickel-plated. Traps, Legs and Supply Pipes are adjustable. The Supply Pipes are made of best Annealed Brass Tubing, iron pipe size.

In ordering goods from this section by telegraph, it is only necessary to use the code word over or opposite the number or size of the article or fixture wanted, preceded by words from code in front of this book.

Example: Cubiment two Pfandherr.
Translation: Ship via Pacific Coast Steamship Company two "Ideal" Solid Porcelain Lavatories $100 \cdot 2 \mathrm{C}$ twenty-seven by thirty-seven inches complete as described.

## "IDEAL" SOLID PORCELAIN OVAL LAVATORIES.

ON SOLID PORCELAIN SWELL PATTERN PEDESTALS

1000.C.

Oral Solid Porcelain Lavatory and Pedestal. Glazed Pure White; Nickel-Plated Standing Waste with China Index; Nickel-Plated Low Pattern Compression Basin Cocks with China Indexes; NickelPlated $11 / 2$-inch Elliptical Trap to Wall; Nickel-Plated Supply Pipes to Wall; Nickel-Plated Wall Stays.
Code. Pfadlos Pfaelzer Pfahl
Size, inches ..... 22x27 日も×33 ..... $27 \times 37$
Lavatory complete as described ..... $\$ 63.00 \quad 65.00$ ..... 74.00
Shipping weight, each, lbs. ..... 150 ..... 160 ..... 240Code........................................................................................ Pfahlbau Pfahldorf PfahlholzLavatory with Pedestal, Standing Waste and Wall Stays only........... \$52.00 $54.00 \quad 63.00$
Lavatory Fittings.
Oral Bevel Edge Plate Glass Mirror with Nickel-Plated Frame, 955 -C, $21 \times 30$ ..... $\$ 23.00$
Nickel-Plated Comb and Brush Holder, 884-C ..... 2.25
Opal Glass Towel Bar, 916-C, 24 inches long. ..... 3. 00
Nickel-Plated Soap Dish with China Removable Tray, 836-C ..... 2.00
Two Nickel-Plated Tumbler Holders, S51-C. ..... 1.00

## "IDEAL" SOLID PORCELAIN OVAL LAVATORIES.



1002-C.
Oval Solid Porcelain Lavatory. Glazed Pure White; Nickel-Plated Compression Combination Lavatory Supply and Waste with China Indexes, Hot and Cold and Waste; Nickel-Plated Brass Legs with Special Frame and Supports to Wall; Nickel-Plated Adjustable Bag Trap to Wall; Nickel-Plated Supply Pipes to Wall.
Code. Pfandgut Pfandhaus PfandherrSize, inches$22 \times 27 \quad 24 \times 33$
Lavatory complete as described ..... $\$ 80.00 \quad 86.00$ ..... 92.00x 37Shipping weight, lbs120140
Code Pfandklage Pfandkont Pfandsach
Lavatory with Supply and Waste and Legs and Frame only ..... $\$ 73.00 \quad 79.00$ ..... 85.00

## Lavatory Fittings.

Oval Beveled Edge Plate Glass Mirror with Nickel-Plated Frame, $21 \times 30$ inches, 955 -C. ..... $\$ 23.00$
Opal Glass Shelf, 24 inches long, $926-\mathrm{C}$ ..... 4.50
Nickel-Plated Soap Dish with Removable Tray, 823-C ..... 1.10
Nickel-Plated Towel Bar, 20 inches long, 895-C ..... 2.50
Nickel-Plated Tooth Brush Holder with Tumbler, 866-C ..... 1.25

## SOLID PORCELAIN SQUARE LAVATORY.

WITH BACK AND NICKEL-PLATED LEGS.


$100 \pm \cdot \mathrm{C}$.
Square Solid Porcelain Lavatory and Back, Glazed Pure White; Nickel-Plated Low Pattern Compression Basin Cocks, with China Indexes Hot and Cold; Nickel-Plated Standing Waste with China Index; Nickel-Plated Brass Legs.
Code. Pfarrant Pfarrius PfarrkindSize, inches22x $2421 \times 26 \mathbf{2 2 \times 3 0}$Height of back, inches$12 \quad 12$15
Lavatory complete as described ..... $\$ 43.00 \quad 45.00 \quad 49.00$
Shipping weight, each, lbs ..... 145 175 ..... 205
With Iron Legs Painted White Enamel, deduct \$4.50.
With Patent Overflow Bowl, Nickel-Plated Strainer and Waste Plug, deduct $\$ 3.50$.

| Code. | Pfauchen | Pfauen | Pfeffer |
| :---: | :---: | :---: | :---: |
| Lavatory with Back and Standing Waste only | \$30.00 | 32.00 | 36.00 |

## Lavatory Fittings.

Oblong Bevel Edge Plate Glass Mirror with Nickel-Plated Frame, $16 \times 24$ inches, $954-C . . . \$ 14.00$
Nickel-Plated Comb and Brush Holder, 885-C.2.20
Nickel-Plated Soap and Tumbler Holder, 846-C ..... 2.00
Nickel-Plated Tooth Brush Holder, 860-C ..... 1.20
Nickel-Plated Towel Bar, 18 inches, $900-\mathrm{C}$ ..... 65

In Orders and Specifications give Plate Numbers and Sizes.

## SOLID PORCELAIN ROUND FRONT LAVATORY.

WITH SOLID BACK.


$1006 \cdot{ }^{-}$.

Round Front Solid Porcelain, one piece Lavatory and Solid Porcelain Leg, Glazed Pure White, with connection to wall; Nickel-Plated Compression Low Pattern Basin Cocks with China Indexes; Nickel-Plated Overflow Grate, and Waste Plug with Rubber Stopper.
Code ..... Pfeiler
Lavatory complete as described. ..... $\$ 43.00$
Shipping weight, each, lbs ..... 135
With Nickel-Plated Standing Waste, add $\$ 3.50$.
Pfeilgift
Lavatory with Overflow Grate and Plug only ..... $\$ 30.50$

## Dimensions:

Length at back, 24 inches; back to front, 23 inches; height of back at center, 8 inches.

## Lavatory Fittings.

Oral Berel Edge Plate Glass Mirror with Nickel-Plated Frame $16 \times 24$ inches, 955 -C..... $\$ 14.00$
Nickel-Plated Towel Bar, 30-inch, 902-C .................................................................... 2.00
Nickel-Plated Tooth Brush and Soap Holder, with Tumbler, 865-C.............................. 3.00
Nickel-Plated Tumbler Holder, 851-C.

## SOLID PORCELAIN LAVATORY.

WITH SOLID BACK.


1009-C.
Corner Solid Porcelain, one piece Lavatory, Glazed Pure White. Nickel-Plated Compression Low Pattern Basin Cocks with China Indexes; Nickel-Plated Overflow Grate and Waste Plug, with Rubber Stopper; Nickel-Plated Brass Leg, with Connection to Wall.
Code ..... Pfeilhorn
Each complete as described ..... $\$+3.00$
Shipping weight each, lbs. ..... 135With Nickel-Plated Standing Waste, add $\$ 3.50$.With Solid Porcelain Leg, add \$2.00.With Iron Leg Painted White Enamel, deduct \$2.00.
Code Pfeilspiel
Lavatory with Overflow Grate and Plug only ..... $\$ 30.50$

## Dimensions :

Length at sides, $191 / 2$ inches; greatest depth, 28 inches; corner of walls to front, 25 inches,

## Lavatory Fittings.

Round Bevel Edge Plate Glass Mirror, with Nickel-Plated Frame, 24 -inch, 953 -C ..... $\$ 18.00$
Nickel-Plated Soap and Tumbler Holder, 845-C ..... 2.00
Nickel-Plated Towel Bar, 20-inch, 901-C ..... 1.10
Nickel-Plated Comb and Brush Holder, 885-C ..... 2.20

## OVAL MARBLE LAVATORY.



$$
\dagger \text { 1010-C. }
$$

Oval Italian Marble Slab, $33 \times 24$ inches, $11 / 2$ inches thick, countersunk extra deep, with Shell Soap Cup and Roll Edge; 14x19 Straight Back D Bowl (Vitreous China); Nickel-Plated Compression Combination Lavatory Supply and Waste, with China Indexes on Valves and Waste; Nickel-Plated Supply Pipes to Wall, with Stop Valves; Nickel-Plated $11 / 2$-inch Centrifugal Adjustable P Trap; Adjustable Nickel-Plated Brass Offset Legs with Frame and Braces to Wall; Screws and Basin Clamps.

> Code.
> Pfennig
> Lavatory, complete as described........................................................................ $\$ 90.50$
> Weight each, lbs................................................................................................ 197

Price for above Lavatory in Tennessee Marble same as for Italian.

## Roughing-in Measurements:

Height, $301 / 2$ inches; distance from face of finished wall to center of supplies, 6 inches; from face of finished wall to center of waste, 12 inches; from floor to center of supplies in wall, $161 / 2$ inches; from floor to center of waste outlet in wall, $151 / 2$ inches; center to center of supplies, 12 inches supplies, $3 / 8$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.


$\dagger$ 1012- ${ }^{\circ}$.
Italian Marble Countersunk Slab, 22x32 inches, $1 \frac{1}{2}$ inches thick, with Shell Soap Cup, Triple Bead Moulding, 16 -inch Back and 5 -inch Aprons; $14 \times 19$ Straight Back D Bowl (Vitreous China); Nickel-Plated Fuller Combination Lavatory Supply and Waste, with China Name Plates on Handles and top of Waste; Nickel-Plated Supply Pipes to the Wall with Stop Valves; Nickel-Plated $11 / 2$-inch Bag Trap; Nickel-Plated Cast Brass Offset Lavatory Legs and Nickel-Plated Apron Supports; Screws and Basin Clamps.
Code
Pflanze

Price for above Lavatory in Tennessee Marble same as for Italian.

## Roughing-in Measurements:

Height from floor to top of slab, 30 inches; distance from face of finished wall to center of supplies, 3 inches; from face of finished wall to center of waste, 3 inches; from floor to center of supplies in wall, 15 inches; from floor to center of waste outlet in wall, 16 inches; center to center of supplies, 12 inches; supplies, $3 / 8$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.



Light Tennessee Marble Countersunk Slab, $22 \times 32$ inches, $11 / 4$ inches thick, with Shell Soap Cup. Triple Bead Moulding and 16 -inch back; $14 \times 17$ Oval Bowl (Vetreous China), decorated inside and outside; Nickel-Plated No. + Improved Fuller Basin Cocks; Nickel-Plated Ideal Waste; Nickel-Plated Adjustable Supply Pipes with Improved Air Chambers and Stop Valves; Nickel-Plated Adjustable Standard Trap with Vent; Nickel-Plated Cast Brass Brackets and Braces to Wall; Screws and Basin Clamps.


For plain China Basin instead of Decorated, deduct $\$ \ldots . .$.
Marble Floor Slab extra.

## Roughing-In Measurements :

Center to center of supplies, 12 inches; distance from floor to center of supplies in wall, 11 inches; from floor to center of waste outlet in wall, 6 inches; supplies, $3 / 8$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.


$\dagger$ 1016-C.
Light Tennessee Marble Countersunk Slab, 22x32 inches, 1 1/4-inch thick, with Shell Soap Cup, Triple Bead Moulding, 16 -inch Back and 5 -inch Apron; 14x19-inch Ideal Decorated Bowl (Vitreous China); Nickel-Plated No. 10 Improved Fuller Basin Cocks; Nickel-Plated Ideal Waste; NickelPlated Adjustable Supply Pipes to Floor, with Improved Air Chambers; Nickel-Plated $11 / 2$-inch Standard Trap to Floor with Vent to Wall ; Nickel-Plated Adjustable Offset Lavatory Legs ; NickelPlated Apron Wall Supports ; Screws and Basin Clamps.

$$
\begin{aligned}
& \text { Code ............................................................................................................... Pfaume } \\
& \text { Lavatory complete as described. } \\
& \$ 70.00 \\
& \text { Shipping weight, lbs. }
\end{aligned}
$$

Marble Floor Slab extra.

## Roughing-in Measurements:

Center to center of supplies, 12 inches ; center of supplies to face of finished wall, $33+$ inches ; center of waste to face of finished wall, $3 \frac{1}{4}$ inches ; supplies, $3 / 8$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.


$\dagger$ 1018-C.

Light Tennessee Marble Countersunk Slab, $24 \times 32$ inches, $11 / 4$-inch thick, with Ogee Moulding; 16 -inch Back and 5-inch Aprons; 16 -inch Round Decorated Bowl (Vitreous China); Nickel-Plated No. 8 Improved Fuller Basin Cocks; Nickel-Plated Unique Waste; Nickel-Plated Supply Pipes to Floor, with Supply Valves; Nickel-Plated $11 / 2$-inch Elliptical Trap to floor; Nickel-Plated Offset Lavatory Legs; Nickel-Plated Apron Supports; Screws and Basin Clamps.

> Code.
> Pflege

Price for above Lavatory in Italian Marble same as for Tennessee.

## Roughing-in Measurements:

Distance from face of finished wall to center of supplies, $53 / 4$ inches; from face of finished wall to center of waste, $31 / 2$ inches; center to center of supplies, 12 inches; supplies, $3 / 8$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.


$\dagger$ 1021-C.

Italian Marble Countersunk Slab, $20 \times 30$ inches, $1 \frac{1}{4}$-inch thick with Ogee Moulding; 12 -inch Back and Left Hand End and 5-inch Aprons; $14 \times 17$ Oval Patent Overflow Bowl (Vitreous China), with Metal Plug and Rubber Stopper; Nickel-Plated No. 8 Improved Fuller Basin Cocks; NickelPlated Chain Stay and Chain ; Nickel-Plated Supply Pipes to Floor; Nickel-Plated, $11 / 2$-inch Elliptical Trap to Floor; Nickel-Plated Offset Lavatory Leg; Nickel-Plated Apron Wall Supports; Screws and Basin Clamps.
Code Left Hand. ..... Pflegist
Code Right Hand ..... Pflegord
Lavatory complete as described ..... $\$ 38.00$
Shipping weight, pounds ..... 165
Code Left Hand.. ..... Pfleguerd
Code Right Hand ..... Pflicht
Marble Lavatory with Bowl and Clamps only ..... $\$ 22.80$

Price of above Lavatory in Tennessee Marble, same as for Italian.

## Roughing-in Measurements:

Distance from face of finished back wall to center of supplies, $33 / 4$ inches ; from face of finished back wall to center of waste, 11 inches ; center to center of supplies, 12 inches ; supplies, $3 / 8$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.


$\dagger$ 1022-C.
Italian Marble Countersunk Slab, 20x30 inches, $1 \frac{1}{4}$-inch thick, with Ogee Moulding and 10-inch Back; 14 x 17 Patent Overflow Oval Bowl, with Metal Plug; Nickel-Plated No. 1 Improved Fuller Basin Cocks; No. 11 Nickel-Plated Chain Stay and Basin Chain; Nickel-Plated Supplies to Wall with Stop Valves; Nickel-Plated $11 / 2$-inch Menlo P Trap; Nickel-Plated No. $5316 \times 18$-inch Lavatory Brackets; Screws and Basin Clamps.

Code.
Pflock

Shipping weight, lbs.. 135

Code

Pflogen

Marble Lavatory with Bowl and Clamps only.......................................................... $\$ 15.60$
Price of above Lavatory in Tennessee Marble same as for Italian.

## Roughing-in Measurements:

Distance from face of finished wall to center of supplies, $33 / 4$ inches; from face of finished wall to center of waste, 11 inches; from floor to center of supplies in wall, $171 / 2$ inches; from floor to center of waste outlet in walls, 16 inches; center to center of supplies, 12 inches; supplies, $1 / 2-\mathrm{inch}$ iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY


$\dagger$ 1025-C.
Tennessee Marble Countersunk Slab, 20x28 inches, $11 / 4$-inch thick, with Ogee Moulding 10 -inch Back and Right Hand End; 14x17 Patent Overflow Oval Bowl (Vitreous China) with Metal Plug; Nickel-Plated No. 0 Improved Fuller Basin Cocks; Nickel-Plated No. 11 Chain Stay and Basin Chain ; Nickel-Plated Supplies to wall with Stop Valves; Nickel-Plated Adjustable P Trap ; Nickel-Plated Straight Lavatory Leg; Basin Clamps and Screws.

| Code, Right Hand | P'flugross |
| :---: | :---: |
| Code, Left Hand.. | Pflugschar |
| Lavatory complete as described | \$28.00 |
| Shipping weight, lbs. | 100 |
| Code, Right Hand . Code, Left Hand..... | Pflugstock Pflugstump |
| Marble Lavatory with Bowl and Clamps only | \$18.50 |

Price for above Lavatory in Italian Marble same as Tennessee.

## Roughing-in Measurements :

Distance from face of finished wall to center of supplies, $33 / 4$ inches ; from face of finished wall to center of waste, 11 inches; from floor to center of supplies in wall, $17 \frac{1 / 2}{}$ inches ; from floor to center of waste outlet in wall, 16 inches ; center to center of supplies, 12 inches; supplies $1 / 2$-inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.


$\dagger$ 1026-C.

Italian Marble Countersunk Slab, $20 \times 26$ inches, $11 / 4$ inches thick, with Ogee Moulding and 10 -inch Back; 14-inch Round Patent Overflow Bowl with Metal Plug; Nickel-Plated No. 1 Improved Fuller Basin Cocks; Nickel-Plated No. 11 Chain Stay and Basin Chain; Nickel-Plated Supplies to Wall with Cross Handle Stops; Nickel-Plated $11 / 2$-inch Adjustable P Trap; Nickel-Plated Lavatory Brackets with Braces to Wall; Screws and Basin Clamps.
Code. ..... Pfortader
Lavatory complete as described ..... $\$ 23.00$
Shipping weight, pounds ..... 125
Code Pfortsegel
Iarble Lavatory with Bowl and Clamps only ..... $\$ 13.50$

Price of above Lavatory in Tennessee Marble same as for Italian.

## Roughing-In Measurements:

Distance from face of finished wall to center of supplies, $33 / 4$ inches; from face of finished wall to center of waste, 11 inches; from floor to center of supplies in wall, $171 / 2$ inches; from floor to center of waste outlet in wall, 16 inches; center to center of supplies, 12 inches; supplies, $1 / 2$ inch iron pipe size.
$\dagger$ Carried in San Francisco only.

## MARBLE LAVATORY.



1027-C.

Italian Marble Quarter Circle Countersunk Slab $22 \times 22$ inches, $1 / 1 / 4$ inches thick, with Plain Chamfer Moulding and 8 -inch Backs; 14-inch Round Patent Overflow Bowl with Metal Plug; NickelPlated No. 0 Tee Handle Compression Basin Cocks; Nickel-Plated Supply Pipes to Wall; Nickel-Plated $11 / 4$-inch Adjustable P Trap; Screws and Basin Clamps.
Code. Pfriem
Lavatory complete as described ..... $\$ 15.50$
Shipping weight, lbs ..... 115

## Roughing-in Measurements:

Distance from face of finished side wall to center of supplies, 3 inches; from face of finished side wall to center of waste, $93 / 4$ inches; from floor to center of supplies in wall, $17 \frac{1}{2}$ inches; from floor to center of waste outlet in wall, 16 inches; center to center of supplies, 3 inches; supplies, $3 / 8$-inch iron pipe size.

## MARBLE BARBER SLABS.


$\dagger 1030-\mathrm{C}$.

Italian Marble Countersunk Slab, 22x48 inches, $11 / 4$ inches thick, with Ogee Moulding; 5 -inch Aprons and 16 -inch Back; $14 \times 19$ Straight Back D Basins (Vitreous China); Patent Overflow with Nickel-Plated Removable Overflow Strainers and Metal Plugs; Nickel-Plated No. 12 Improved Fuller Basin Cocks; Nickel-Plated Chain Stays and Chains; Special Design Nickel-Plated Improved Fuiier Double Shampoo Faucet, with Hose and Sprinklers; Nickel-Plated $11 / 2$-inch Elliptical P Traps with Vents; Nickel-Plated Offset Lavatory Legs; Nickel-Plated Apron Supports; Screws and Basin Clamps.

> Code
> Pfunden
> Lavatory complete as described. $\$ 113.00$
> Shipping weight, lbs..................................................................................... 270
> Above Lavatory in Tennessee Marble same price as Italian.

Barber Slabs of special sizes and designs made to order. Prices on application.
$\dagger$ Carried in San Francisco only.


Italian Marble Countersunk Slab, $24 x 48$ inches, $1 \frac{1}{4}$ inches thick, with Roll Edge and 5 -inch Aprons; two 14 x 17 Patent Overflow Oval Basins (Vitreous China), with Metal Plugs and Basin Chains; Nickel-Plated Improved Fuller Combination Double Basin Cock with Shampoo Attachment, Rubber Hose and Sprinkler Holder and Rings for Chains; two Nickel-Plated Straight Supply Pipes; two $11 / 2$-inch Nickel-Plated Elliptical traps to floor; four Nickel-Plated Brass Offset Lavatory Legs with Braces; Brass Basin Clamps.
CodePfuschen
Complete as described ..... $\$ 97.50$
Shipping weight each, pounds. ..... 290

If with four No. 8 Fuller Basin Cocks and 1188-C Fuller Shampoo Cock, all with Nickel-Plated Supplies to floor, add $\$ 5.00$.
For Stop Valves in Supply Pipes, add for each $\$ 1.00$. If with 14 x 19 Patent Overflow Straight Back D Basins, add $\$ 2.50$.

Above Lavatory in Tennessee Marble, same price as Italian.
$\dagger$ Carried in San Francisco only.

## MARBLE BASIN SLABS.

AMERICAN, ITALIAN OR TENNESSEE

Our Stock of Marble Basin Slabs is all $11 / 4$-inch Countersunk Marble with $7 / 8$-inch Backs. The edges are all finished with a plain Chamfer Moulding. See 1044-C, page 289.


## 1033-C.

Quarter Circle or Corner Slab (with two backs), cut for 14 -inch Bowl, Hot and Cold Water and Basin Clamps.

> For 14-Inch Round Bowl With 8-Inch Backs.

| Size, Inches. | Contents, Square Fect. |  | American. |  | Italian. |  | Tennessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code, | Each. | Code. | Each. | Code. | Each. |
| $18 \times 18$ | $2 \mathrm{ft} 6 in.$. | $2 \mathrm{ft}$.4 in . | Phacelina.... | \$8.01 | Phacopien .. | \$ 8.22 | Phaeton..... | \$8.22 |
| $20 \times 20$ | 3 ft .1 in . | 2 ft . 8 in . | Phacium..... | \$ 9.44 | Phacusa...... | \$ 9.89 | Phagedena.. | 9.89 |
| $22 \times 22$ | 3 ft .8 in . | 2 ft .11 in . | Phacodes ... | 9.23 | Phaenna ..... | 9.75 | Phager....... | 9.75 |
| $24 \times 24$ | 4 ft .4 in. | 3 ft . 2 in . | Phacolite.... | 12.57 | Phaestios ... | 13.14 | Phagnalon.. | 13.14 |

For 14-Inch Round Bowl With 10 -Inch Backs.

| Size, Inches. | Contents, Square Feet. |  | American. |  | Italian. |  | Tennessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code. | Each. | Code. | Each. | Code. | Each. |
| $20 \times 20$ | 3 ft .1 in . | 3 ft .3 in . | Phagonem .. | \$10.14 | Phalacres.... | \$10.62 | Phaleron.... | \$10.62 |
| $22 \times 22$ | 3 ft .8 in . | 3 ft . 7 in . | Phagros..... | *10.13 | Phalangal... | \$10.58 | Phalidure... | +10.58 |
| $24 \times 24$ | 4 ft . 4 in. | 3 ft .10 in . | Phagrum.... | 13.38 | Phalarica ... | 14.00 | Phaliga...... | 14.00 |

For 14-Inch Round Bowl With 12-Inch Backs.

| Size, Inches. | Contents, Square Feet. |  | American. |  | Italian. |  | Tennessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code, | Each. | Code. | Each. | Code. | Each. |
| $20 \times 20$ | 3 ft .1 in . | 3 ft .10 in . | Phallene..... | \$10.85 | Phaloria ..... | \$11.37 | Phanagora.. | \$11.37 |
| $22 \times 22$ | $3 \mathrm{ft}$.8 in . | 4 ft . 2 in. | Phaliques... | 12.44 | Phaltiel ...... | 13.04 | Phanarum .. | 13.04 |
| $24 \times 24$ | 4 ft .4 in . | 4 ft .6 in . | Phallorum .. | 14.16 | Phameas .... | 14.82 | Phanocles... | 14.82 |

## For $14 \times 17$ Oval Bowl With 10 -Inch Backs.

| Size, Inches. | Contents, Square Feet. |  | American. |  | Italian. |  | Tennessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code. | Each. | Code. | Each. | Code. | Each. |
| $22 \times 22$ | 3 ft .8 in . | 3 ft .7 in . | Phanothea.. | \$11.94 | Phaonis..... | \$12.54 | Pharbitis... | \$12.54 |
| $24 \times 24$ | $4 \mathrm{ft}$.4 in. | $3 \mathrm{ft}$.10 in . | Phansigar... | 13.71 | Pharacim. | 14.33 | Pharcedon.. | 14.33 |

All quarter circle slabs will be shipped with 8 -inch backs unless otherwise ordered.
In ordering Slabs, be particular to state whether American, Italian or Tennessee Marble is wanted; also whether drilled for one or two cock holes or chain stay; give size of bowl and whether round, oval or square.

For price of marble and extras for special slabs see page 290.

## In Orders and Specifications give Plate Numbers and Sizes.

## MARBLE BASIN SLABS.

AMERICAN, ITALIAN OR TENNESSEE.

Our stock of Marble Basin Slabs is all $11 / 4$-inch Countersunk Marble with $7 / 8$-inch Backs. The edges are all finished with a plain Chamfer Moulding. See 1044-C, page 289.


1034-C.
Single Back Slab cut for 14 inch Round Bowl, Hot and Cold Water and Basin Clamps.


## 1036-C.

Recess Slab with Back and two Ends. These Slabs vary so in size that they are only made to order.

For 14-Inch Round Bowl With 10-Inch Backs, 1034-C.

| Size, Inches. | Contents, Square Feet. |  | American. |  | Italian. |  | Tennessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code. | Each. | Code. | Each. | Code. | Each. |
| $20 \times 22$ | 3 ft .6 in . | 1 ft .10 in. | Pharillon.... | \$ 9.27 | Phascum..... | \$ 9.69 | Phazemon .. | \$ 9.69 |
| $20 \times 24$ | 3 ft .10 in . | 2 ft . 0 in. | Pharisean... | * 10.17 | Phasganon.. | * 10.52 | Pheasant.... | +10.52 |
| $20 \times 26$ | 4 ft . 1 in . | 2 ft . 2 in . | Pharmaco... | 10.88 | Phasiron..... | 11.34 | Phedimes ... | 11.34 |
| $20 \times 28$ | $4 \mathrm{ft}, 5 \mathrm{in}$. | 2 ft .4 in . | Pharnaces... | 11.75 | Phasmien.... | 12.24 | Phedons ..... | 12.24 |
| $20 \times 30$ | 4 ft . 8 in. | 2 ft .5 in . | Pharobank.. | 12.35 | Phasquier... | 12.87 | Phedres...... | 12.87 |
| $22 \times 32$ | 5 ft . 5 in. | 2 ft . 7 in . | Pharology .. | 13.07 | Phatagin.... | 14.67 | Phedrope ... | 14.67 |
| $24 \times 34$ | 6 ft . 3 in. | 2 ft . 9 in . | Pharsalia ... | 15.96 | Phaules ...... | 16.64 | Phegeos..... | 16.64 |
| $24 \times 36$ | 6 ft . 7 in . | 2 ft .11 in . | Phascolia .... | 16.85 | Phaulium ... | 17.56 | Phegeum.... | 17.56 |

For 14x17-Inch Oval Bowl with 10-Inch Backs, 1034-C.

| Size, Inches. | Contents, Square Feet. |  | American. |  | Italian. |  | Tennessee |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code. | Each. | Code. | Each. | Code. | Each. |
| $20 \times 24$ | $3 \mathrm{ft}$.10 in . | 2 ft .0 in . | Phegidis..... | \$10.46 | Phemius ..... | \$10.82 | Phenix..... | \$10.82 |
| $20 \times 26$ | 4 ft . 1 in. | 2 ft .2 in . | Phelline...... | 11.18 | Phenate...... | 11.64 | Phenol........ | 11.64 |
| $20 \times 28$ | 4 ft . 5 in. | 2 ft .4 in . | Phellique.... | 12.08 | Phengite..... | 12.60 | Phenyle...... | 12.60 |
| $20 \times 30$ | 4 ft . 8 in . | 2 ft .5 in . | Phellose ..... | 12.69 | Phenicure... | 13.23 | Pherozes.... | 13.23 |
| $22 \times 32$ | 5 ft . 5 in. | 2 ft .7 in . | Phelsuma .... | 14.48 | Pheniton..... | 15.08 | Phetuse....... | 15.08 |

In ordering Slabs be particular to state whether American, Italian or Tennessee Marble is wanted; also whether drilled for one or two cock holes or chain stay; give size of bowl and whether same is round, oval or square.

For price of marble and extras for special slabs, see page 290.
Special size marble slabs of any description made to order.

## MARBLE BASIN SLABS.

AMERICAN, ITALIAN OR TENNESSEE.

Our stock of Marble Basin Slabs is all $11 / 4$-inch Countersunk Marble with $7 / 8$-inch Backs. The edges are all finished with a plain Chamfer Moulding.


1037-C.

Slab with Back and Right-Hand End. (Cut for 14 -inch round bowl, hot and cold water and basin clamps.)

1039-C.


Slab with Back and Left-Hand End. (Cut for 14 -inch round bowl, hot and cold water and basin clamps.)

For I4-Inch Round Bowl with 10-Inch Backs, 1037-C.

| Size, inches. | Contents, square feet. |  | American. |  | Italian. |  | Tennessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code. | Each. | Code. | Each... - | Code. . | Each. - |
| $20 \times 24$ | 3 ft .8 in . | 3 ft .6 in. | Phialia....... | \$11.63 | Philately..... | \$12.17 | Philiberto... | \$12.17 |
| $20 \times 26$ | 3 ft .11 in . | 3 ft . 8 in . | Phidoles..... | \$12.33 | Philemata ... | * 12.89 | Philinna..... | 12.89 |
| $20 \times 28$ | 4 ft . 3 in. | 3 ft .10 in . | Phigalea..... | 13.20 | Philemon .... | 13.80 | Philistim..... | 13.80 |
| $20 \times 30$ | 4 ft . 6 in. | 3 ft .11 in . | Philactis.... | 13.82 | Philetam.. .. | 14.45 | Philistos.... | 14.45 |
| $22 \times 32$ | 5 ft .3 in . | 4 ft .3 in . | Philander... | 15.47 | Philetor...... | 16.49 | Philocali..... | 16.49 |

For 14-Inch Round Bowl with 10-Inch Backs, 1039-C.

| Size, inches. | Contents, square feet. |  | American. |  | Italian. |  | Temnessee. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Slab. | Backs. | Code. | Each. | Code. | Each. | Code. | Each. |
| $20 \times 24$ | 3 ft . 8 in. | $3 \mathrm{ft}$.6 in . | Philocome.. | \$11.63 | Philomache ${ }^{\prime}$ | \$12.17 | Philophron. | \$12.17 |
| $20 \times 26$ | 3 ft .11 in . | 3 ft . 8 in . | Philocrene.. | 12.83 | Philomedes. | 12.89 | Philosarca.. | 12.89 |
| $20 \times 28$ | 4 ft . 3 in. | $3 \mathrm{ft}$.10 in . | Philodices... | 13.20 | Philometor.. | 13.80 | Philoscote... | 13.80 |
| $20 \times 30$ | 4 ft . 6 in. | $3 \mathrm{ft}$.11 in . | Philodrome. | 13.82 | Philomot.... | 14.45 | Philostize ... | 14.4 .5 |
| $22 \times 32$ | 5 ft . 3 in. | 4 ft . 3 in. | Philolog..... | 15.47 | Philopator.. | 16.49 | Philotera.... | 16.49 |

In ordering Slabs be particular to state whether American, Italian or Tennessee Marble is wanted; also whether drilled for one or two cock holes or chain stay; give size of bowl and whether same is round, oval or square.

For price of Marble and extras for special Slabs see page 290.
Special size Marble Slabs of any description made to order.

## MARBLE BASIN SLABS.

american, ITALIAN OR TENNESSEE.


1041-C.
Slab with Back and Left Hand End and with Apron on Front and Right Hand End (cut for three basins, hot and cold water, and chain stay for each.)

These Slabs can be made for any number of Basins, with Back and End, either right or left hand, and front Apron to suit ; or can be made with Back only and Apron on both ends and in front.

Where more than four Basins are wanted, the Slab will have to be made of two or more pieces of marble.

## MOULDINGS FOR MARBLE BASIN SLABS.



1042-(.
Sectional Cut Showing Ogee Moulding. Sectional Cut Showing Fillet and Chamfer Moulding.


104t-C.

$1045-\mathrm{C}$. Sectional Cut Showing Plain Chamfer Moulding. Sectional Cut Showing Triple Bead Moulding. When ordering Lavatories be particular to state what kind of Moulding is wanted.

For prices of Mouldings see page 290.


1046-C.

## SHELL SOAP DISH.

FOR MARBLE BASIN SLAB.
For cutting same on special slabs, $\$ 3.75$ and upwards.

For price of marble and extras for special slabs see page 290.

In Orders and Specifications give Plate Numbers.

## MARBLE BASIN AND FLOOR SLABS.

COUNTERSUNK AND DRILLED.

## 1-inch (floor slabs only) per superficial foot

$11 / 8$ or $11 / 4$-inch
$11 / 2$-inch
$13 / 4$ or 2 -inch
All basins to have round bowls and drilled plain hot and cold water and chain stay. If oval or square bowls or special waste, see list of extras below. All quarter circle slabs figured as square slabs with two polished edges. \$1.15 $\$ 1.25$
1.30
1.40
Light Cloud
Teunessee

## BACKS AND APRONS.

Per superficial foot, $3 / 4$ or $7 / 8$ inch

No back figured at less than 8 inches, nor apron at less than 6 inches wide.

## SINK SLABS. <br> FLUTED OR GROOVED WITH SQUARE HOLE.

1114-inch thick, per superficial foot............................................................ 2.70 2. 80
$11 / 2$-inch thick, per superficial foot.
2.95

## SINK BACKS.

Plain $3 / 4$-inch or $7 / 8$-inch thick, per superficial foot. ..... 85
Cut to drain, $3 / 4$-inch or 78 -inch thick, per superficial foot. ..... 80 ..... 90
Bevel edge, $3 / 4$-inch or $7 / 8$-inch thick, per superficial foot. ..... 85 ..... 95
WAINSCOTTING AND PARTITIONS.
POLISHED ONE FACE, PER SUPERFICIAL FOOT.
Plain, in small lots, 34 -inch or $7 / 8$-inch thick ..... 85
Plain, in small lots, 1 inch thick ..... 1.00
Plain, in small lots, $1 \frac{1}{8}$-inch or $1 \frac{1}{4}$-inch thick .....  .....  ..... 1.15
Polishing extra faces, per superficial foot. ..... 25 ..... 25
EXTRAS. (Applying to all Marbles).
Cutting for oval bowl, with hot and cold water and chain stay, per superficial foot. ..... 05
Cutting for square bowl, with hot and cold water and chain stay, per superficial foot. .....  10
Cutting for unique or any other special waste, per superficial foot. ..... 10
Basin slabs with two or more holes, add to price including backs and aprons, per super- ficial foot ..... 20
All marble 9 feet long or over, add to above per superficial foot. ..... 19
Extra countersinking, for each additional $1 / 4$-inch of sinkage, per superficial foot. ..... 15
Shell soap dish cut in slabs, each. ..... 3.75
For fitting basin slabs to legs and apron supports, each slab. ..... 75
Hand work on irregular slabs, per hour. ..... 75
Grinding bowls, each. ..... 10
Moulding Basin Slab Backs, per lineal foot ..... 25 o charge
Ogee, Fillet and Chamfer or Plain Chamfer Moulding on Basin Slabs
Ogee, Fillet and Chamfer or Plain Chamfer Moulding on Basin SlabsTriple Bead Moulding or Roll Edge on Basin Slabs..Time charged

Glossed edges always counted as 1 inch in measurement.
Fractional inches always counted as 1 inch in measurement.

## BOXINC.

Boxes containing single slabs or containing less than 15 superficial feet of marble, per each superficial foot ..... 10
Boxes containing 2 or more slabs and containing more than 15 superficial feet of marble, for
each superficial foot
each superficial foot ..... 05 ..... 05
No single box for less than. ..... 50Shipper must be the judge of the pieces most practicable to box together.

## EARTHENWARE BASINS.

PLAIN WHITE




$\dagger \mathbf{1 0 4 8} \mathbf{- C .}$
COMMON OVERFLOW, FOR METAL PLUG.

Code.
Size, inch
Each.
Weight each, lbs.
$\dagger$ Carried in San Francisco only.

EARTHENWARE BASINS.
PLAIN WHITE.

1049.C.

PATENT OVERFLOW FOR METAL PLUG.


1050.C.

PATENT OVERFLOW FOR RUBBER PLUG.


## EARTHENWARE BASINS.

PLAIN WHITE.

| 10.51-1. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| PATENT OVERFLOW FOR METAL PLUG. |  |  |  |  |
| Code Size, inches |  | $\begin{aligned} & \text { Phlygone } \\ & \mathbf{1 4 \times 1 7} \end{aligned}$ | $\begin{gathered} \text { Phlyse } \\ 15 \times 19 \end{gathered}$ | $\begin{aligned} & \text { Phobarum } \\ & \dagger \mathbf{1 6} \times \mathbf{2 1} \end{aligned}$ |
| Each.. |  | \$3.00 | 4.00 | 5.00 |
| Weight ea | .............. | 13 | 14 | 16 |



1052-C.
NO OVERFLOW FOR METAL PLUG.


## EARTHENWARE BASINS.

## PLAIN WHITE.

"Menlo" D Pattern Basin for "Menlo" Basin Waste, (Vitreous China.)


1053-C.
Code Phocodon
Size, inch ..... $+\mathbf{1 4 x} 19$
Each. ..... $\$ 5.50$
Weight each, lbs ..... 16


1054-C.
Cross Section of $1053-\mathrm{C}$.
The "Menlo" Basin is a new design. In shape it is a combination of the regular oval and straight back Basins. It is roomier than either, will keep cleaner and will empty more rapidly than any other Basin now in use.

The glaze on these Basins cannot, like that on regular ware, craze, crack or peel off.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED BASINS.

## ENAMELED INSIDE. PAINTED OUTSIDE.



1060-C.

Round Patent Overflow with Nickel-Plated Waste Plug, Coupling and Rubber Stopper.
Code ..... Phodiles
Size, inch ..... 14
Inside diameter, inch ..... 12
Each. ..... $\$ 2.25$
Weight each, lbs ..... 14


1061-C.

Oval Patent Overflow with Nickel-Plated Strainer, Waste Plug, Coupling and Rubber Stopper.
Code.Phoenica Phoestine
Size, inch ..... $14 \times 17 \quad 15 \times 19$
Inside dimensions, inch ..... 12x15 ..... $13 \times 17$
Each ..... \$3.00 ..... 3.25
Weight each, lbs ..... 20 ..... 24

## PORCELAIN ENAMELED LAVATORY.

ENAMELED ALL OEVR.


1068-C.

Porcelain Enameled All Over Lavatory, with Slab, D Pattern Bowl and Apron, all in one piece; Porcelain Enameled All Over Pedestal; Nickel-Plated Torrance Pattern Fuller Basin Cocks, with China Handles and Indexes; Nickel-Plated Imperial Waste with China Index, Nickel-Plated U'nique Trap to Wall, with Vent, Nickel-Plated Supply Pipes to Wall.

| Code | Pholidote | Phollires |
| :---: | :---: | :---: |
| Size, inch. | 18x27 | 22x33 |
| Size of bowl, inch | $11 \times 15$ | $13 \times 18$ |
| Width of apron, inch. | 5 | $51 / 2$ |
| Lavatory complete as described. | \$44.00 | 49.50 |
| Shipping weight each, lbs | 185 | 250 |
| Shipping measurement, cubic feet | 111/4 | 135/6 |
| Code. | Phologoser | Phomothis |
| Lavatory with Imperial Waste and | \$30.50 | 36.00 |
| Shipping weight, lbs. | 171 | 232 |

Packed in two cases, (Lavatory and Pedestal packed separately.)

## PORCELAIN ENAMELED LAVATORY.

ENAMELED ALL OVER.

+1070 - C.
Porcelain Enameled All Over Lavatory, with Slab, Bowl and Apron all in one piece; NickelPlated Legs, with Wall Supports; Nickel-Plated Torrance Pattern Fuller Basin Cocks with China Handles and Indexes; Nickel-Plated Imperial Waste with China Index; Nickel-Plated Supply Pipes to Wall with Wheel Handle Angle Supply Valves; Nickel Plated Elliptical Tiap to IVall.
CodePhonalite
Size, inch ..... $18 \times 27$
Size of bowl, inch. ..... $11 \times 15$
Width of apron, inch ..... 5
Lavatory complete as described ..... $\$ 45.50$
Shipping weight each, lbs ..... 150
Shipping measurement, cubic feet ..... 5
Code. ..... Phonascum
Lavatory with Nickel-Plated Legs, Wall Supports and Imperial Waste only ..... $\$ 32.50$
Shipping weight, lbs ..... 100One in a case.

[^11]
## PORCELAIN ENAMELED LAVATORY.



1072-C.

Porcelain Enameled Exterior Lavatory, with Slab, Apron, Oval Bowl and Overflow all in one piece, with Porcelain Enameled Brackets; Nickel-Plated Torrance Pattern Fuller Basin Cocks, with China Handles and Indexes; Nickel-Plated Overflow Strainer; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap; Nickel-Plated Supply Pipes to Wall with Wheel Handle Angle Supply Valves.

This Lavatory is designed for use on marble or tile wainscoting, the brackets being adjusted to allow a space between wall and rear of fixture.
Code. ..... Phonateur
Size, inch. ..... $18 \times 24$
Size of bowl, inch. ..... 12x15
Width of apron, inch. ..... 4
Lavatory complete as described ..... $\$ 23.75$
Shipping weight each, lbs ..... 125
Shipping measurement, cubic feet ..... 3 1/12
Code. ..... Phonation
Lavatory with Brackets and Overflow Strainer only ..... $\$ 12.50$
Shipping weight, lbs ..... 116One in a case.

## PORCELAIN ENAMELED LAVATORY.


1074.C.

Porcelain Enameled Exterior Lavatory, with Slab, Apron, Oval Bowl and Back all in one piece, Concealed Wall Hanger; Nickel-Plated Torrance Pattern Fuller Basin Cocks with China Handles and Indexes; Nickel-Plated Imperial Waste, with China Index; Nickel-Plated $11 / 2$-inch Elliptical Trap to Wall; Nickel-Plated Supply Pipes to Wall with Wheel Handle Angle Supply Valves.

| Code. | Phonetico | Phonic | Phonogram |
| :---: | :---: | :---: | :---: |
| Size, inch | +18x24 | $20 \times 24$ | 22x27 |
| Size of bowl, inch. | $111 / 2 \times 16$ | $12 \times 15$ | $12 \times 15$ |
| Height of back, inch. | 11 | 12 | 12 |
| Width of apron, inch. | 5 | 5 | 5 |
| Lavatory complete as described. | \$34.50 | 38.25 | 42.50 |
| Shipping weight, lbs. | 143 | 170 | 185 |
| Shipping measurement, cubic feet. | $91 / 2$ | 117/12 | 143/4 |
| Size 18x24 inches furnished with Nickel-Plated Soap | Dish on b |  |  |
| Code. | Phonoscope | Phonotypic | Phonygame |
| Lavatory with Imperial Waste and Wall Hanger only .............. | \$18.50 | 22.00 | 25.50 |
| Shipping weight, lbs.. | 128 | 152 | 170 |
| † If Enameled all over, add | \$2.00 | 2.25 | 3.00 |
| $\dagger$ Carried in San Francisco only. |  |  |  |

## PORCELAIN ENAMELED LAVATORY.



1076-C.

Porcelain Enameled Exterior Lavatory with Slab Apron, D Pattern Bowl, Overflow and Back all in one piece, with Concealed Wall Hanger; Nickel-Plated No. 8 Fuller Basin Cocks; Nickel-Plated Chain Stay and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall with Wheel Handle Angle Supply Valves.

$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


1077.1.

Porcelain Enameled Exterior Left Hand End Lavatory, with Slab, Apron, Bowl, Overflow, Back and Left-Hand End all in one piece, with Concealed Wall Hanger; Nickel-Plated Low Pattern Compression Basin Cocks with China Indexes; Nickel-Plated Chain Stay and Chain; Nickel-Plated IVaste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Elliptical Trap to Wall; Nickel-Plated Supply Pipes to Wall.

| Code | Phosphate | Phosphide | Photinia |
| :---: | :---: | :---: | :---: |
| Size, inch | 18x24 | $\dagger$ - $20 \times 24$ | +22x27 |
| Size of bowl, inch. | 12x15 | $12 \times 15$ | $12 \times 15$ |
| Height of back, inch. | 10 | 12 | 12 |
| Width of apron, inch | 5 | 5 | 5 |
| Lavatory, complete as described | \$27.00 | 31.00 | 35.50 |
| Shipping weight, lbs.. | 170 | 195 | 220 |
| Shipping measurement, cubic feet | 82/3 | 11 | 131/4 |
| Code... | Photogene | Photologic | Photometre |
| Lavatory, with Wall Hanger and Chain Stay only | \$18.00 | 22.00 | 26.50 |
| Shipping weight, lbs............................................... | 155 | 180 | 205 |

One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.



Porcelain Enameled Exterior Right Hand Lavatory with Slab, Apron, Bowl, Overflow, Back and Right Hand End all in one piece, with Concealed Wall Hanger; Nickel-Plated Low Pattern Compression Basin Cocks with China Indexes; Nickel-Plated Chain Stay and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Elliptical Trap to Wall; Nickel-Plated Supply Pipes to Wall.

| Code. | Phradates | Phranzes | Phraseman |
| :---: | :---: | :---: | :---: |
| Size, inch | $18 \times 24$ | +20 x 24 | +22×27 |
| Size of bowl, inch. | $12 \times 15$ | $12 \times 15$ | $12 \times 15$ |
| Height of back, inch. | 10 | 12 | 12 |
| Width of apron, inch.. | 5 | 5 | 5 |
| Lavatory complete as described. | \$27.00 | 31.00 | 35.50 |
| Shipping weight, lbs. | 170 | 195 | 220 |
| Shipping measurement, cubic feet. | 82/3 | 11 | $13^{1 / 4}$ |
| Code. | Phraseurs | Phrasicles | Phrasimede |
| Lavatory with Wall Hanger and Chain Stay only. | \$18.00 | 22.00 | 26.50 |
| Shipping weight, lbs. | 155 | 180 | 205 |

One in a case.
Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.



## † 1081.C.

Porcelain Enameled Exterior Corner Lavatory with Slab, D Pattern Bowl, Overfiow, Apron and Back $a^{\prime} l$ in one piece, with Concealed Wall Hangers; Nickel-Plated Standing Waste with China Index; Nickel-Plated No. 8 Fuller Basin Cocks with China Handles and China Indexes; Nickel-Plated $11 / 2$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wail; Nickel-Plated Soap Dish.
Code. PhrasisLength of sides, inch..16
Height of back, inch. ..... 7
Size of bowl, inch. ..... 11 1/2 $\times 151 / 2$
Width of apron, inch5
Lavatory complete as described ..... $\$ 25.00$
Shipping weight, lbs ..... 125
Shipping measurement, cubic feet. ..... $67 / 12$
Code ..... Phratores
Lavatory with Soap Dish and Standing Waste only ..... $\$ 14.75$
Shipping weight, lbs. ..... 110
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$\dagger$ 1083. ${ }^{\prime}$.
Porcelain Enameled Exterior Corner Lavatory with Slab, Oval Bowl, Overflow, Back and Apron all in one piece, with Concealed Wall Hangers; Nickel-Plated Keystone Waste; Nickel-Plated Monarch Pattern No. 0 Fuller Basin Cocks; Nickel-Plated $11 / 2$-inch Adjustable $S$ Trap to Floor; Nickel-Plated Supply Pipes to Floor and Nickel-Plated Soap Dish.
CodePhrenicLength on side, inch.16
Size of bowl, inch ..... 11x14
Height of back, inch ..... 6
Width of Apron, inch ..... $41 / 2$
Lavatory, complete as described ..... $\$ 21.00$
Shipping weight, pounds ..... 105
Shipping measurement, cubic feet ..... $41 / 2$
Code. ..... Phrenitis
Lavatory with Keystone Waste and Soap Dish only ..... $\$ 13.50$
Shipping weight, pounds. ..... 95If enameled all over, add $\$ 2.00$One in a case.

+ Carried in San Francisco only.


## PORCELAIN ENAMELED LAVATORY.


$\dagger$ 1085-C.
Porcelain Enameled Exterior Corner Lavatory with Slab, Oval Bowl, Overflow, Back and Apron all in one piece, with Concealed Wall Hangers; Nickel-Plated No. 0 Fuller Basin Cocks; NickelPlated Chain Stay and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Elliptical Trap to Wall; Nickel-Plated Supply Pipes to Wall; Nickel-Plated Soap Dish.

| Code. | Phrictes |
| :---: | :---: |
| Length on side, inch. | 16 |
| Size of bowl, inch. | $11 \times 14$ |
| Height of back, inch. | 6 |
| Width of apron, inch. | $41 / 2$ |
| Lavatory complete as described. | \$18.00 |
| Shipping weight, lbs.. | 100 |
| Shipping measurement, cubic feet. | 4\%6 |
| Code.. | Phrigius |
| Lavatory with Chain Stay and Soap Dish only | \$10.00 |
| Shipping weight, lbs.. | 90 |
| $\dagger$ Carried in San Francisco only. One in a case. |  |

## PORCELAIN ENAMELED LAVATORY.


1086.C.

Porcelain Enameled Exterior Lavatory with Slab, D Pattern Bowl, Overflow, Apron and Back all in one piece, with Concealed Wall Hanger; Nickel-Plated 1182-C Fuller Basin Cocks with China Handles, Indexes and Unions; Nickel-Plated Overflow Strainer and Basin Chain; Nickel-Plated Waste Plug and Coupling with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap; NickelPlated Supply Pipes to Wall; Nickel-Plated Soap Dish.
Code. Phronima
Length, inch ..... 21
Depth, inch ..... 18
Size of bowl, inch ..... $11 \times 15$
Height of back, inch ..... 8
Width of apron, inch ..... 4
Lavatory complete as described. ..... $\$ 20.50$
Shipping weight, lbs ..... 140
Shipping measurement, cubic feet ..... $61 / 2$
Code Phrosine
Lavatory with Wall Hanger, Overflow Strainer and Soap Dish only ..... $\$ 10.25$
Shipping weight, lbs ..... 125

## PORCELAIN ENAMELED LAVATORY.



1087-C.

Porcelain Enameled Exterior Corner Lavatory, with Slab, D Pattern Bowl, Overflow, Back and Apron all in one piece, with Concealed Wall Hangers; Nickel-Plated Torrance Pattern Fuller Basin Cocks with China Handles and Indexes; Nickel-Plated Overflow Strainer and Basin Chain; NickelPlated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap to Wall; NickelPlated Supply Pipes to Wall with Cross Handle Supply Valves; Nickel-Plated Soap Dish.
Code. ..... Phrygian
Length on side, inch ..... 19
Size of bowl, inch ..... 11x15
Height of back, inch ..... 8
Width of apron, inch. ..... 5
Lavatory complete as described. ..... $\$ 22.00$
Shipping weight, Ibs. ..... 135
Shipping measurement, cubic feet. ..... $65 / 12$
Code. Phrygibus
Lavatory with Wall Hangers, Overflow Strainer and Soap Dish only ..... $\$ 10.75$One in a case.

## PORCELAIN ENAMELED LAVATORY.


$\dagger$ 1090-C.
Porcelain Enameled Exterior Lavatory with Slab, D Pattern Bowl, Overflow, Back and Aprun all in one piece, with Secret Brackets; Nickel-Plated Buckeye Waste; Nickel-Plated Monarch Pattern No. 0 Fuller Basin Cocks; Nickel-Plated $11 / 2$-inch Elliptical Trap to Wall; Nickel-Plated Supply Pipes to Wall; Nickel-Plated Soap Dish.
Code PhrynesSize, inchHeight of back, inch$18 \times 24$
Size of bowl, inch. ..... $111 / 2 \times 16$
Width of apron, inch ..... 3
Lavatory complete as described ..... $\$ 25.00$
Shipping weight, lbs ..... 145
Shipping measurement, cubic feet. ..... 65/6
Code ..... Phrynikos
Lavatory with Secret Brackets, Soap Dish and Buckeye Waste only ..... $\$ 16.00$
Shipping weight, lbs ..... 130One in a case.

[^12]
## PORCELAIN ENAMELED LAVATORY.



1092-C.

Porcelain Enameled Exterior Lavatory with Slab; D Pattern Bowl, Overflow, Back and Apron all in one piece, with Secret Brackets; Nickel-Plated Broughton Self-Closing Basin Cocks; NickelPlated Overflow Strainer; Nickel-Plated Waste Plug and Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall with Cross Handle Supply Valves; Nickel-Plated Soap Dish.

| Code. | Phrynops | Phryscon |
| :---: | :---: | :---: |
| Size, inch. | $18 \times 24$ | † $20 \times 24$ |
| Size of bowl, inch | $111 / 2 \times 16$ | $111 / 2 \times 16$ |
| Height of back, inch. | 10 | 10 |
| Width of apron, inch | 3 | 3 |
| Lavatory complete as described. | \$27.75 | 30.25 |
| Shipping weight, lbs.. | 145 | 160 |
| Shipping measurement, cubic feet. | 71/6 | $81 / 2$ |
| Code. | Phygasie | Phygela |
| Lavatory with Secret Brackets, Soap Dish and Strainer only | \$12.50 | 15.00 |
| Shipping weight, lbs. | 130 | 145 |
| One in a case. |  |  |
| $\dagger$ Carried in San Francisco only. |  |  |

## PORCELAIN ENAMELED LAVATORY.



1093-C.
Porcelain Enameled Exterior Lavatory with Slab, Bowl, Overflow, Back and Apron all in one piece; Nickel-Plated Monarch Pattern No. 0 Fuller Basin Cocks; Nickel-Plated Overflow Strainer; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable S Trap to Floor; Nickel-Plated Supply Pipes to Floor with Stops; Nickel-Plated Soap Dish.


## PORCELAIN ENAMELED LAVATORY.

DESIGNED FOR USE IN ALCOVES, CLOSETS AND WARDROBES IN OFFICES, HOTELS AND OTHER PUBLIC BUILDINGS.

† 1096-C.
Porcelain Enameled Exterior Recess Lavatory, with Slab, Oval Bowl, Overflow, Apron, Back and Ends all in one piece, with Concealed Wall Hangers; Nickel-Plated Torrance Pattern Fuller Basin Cocks, with China Handles and Indexes; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch P Trap to Wall; Nickel-Plated Supply Pipes to Wall with Wheel Handle Supply Valves.

| Code | Phyllon | Phyllopes |
| :---: | :---: | :---: |
| Size, inch. | $201 / 2 \times 26$ | 21x31 |
| Size of bowl, inch.. | $12 \times 15$ | $13 \times 17$ |
| Height of back, inch | 8 | 8 |
| Width of apron, inch | 5 | 5 |
| Lavatory complete as described | \$31.50 | 36.50 |
| Shipping weight, lbs. | 165 | 205 |
| Shipping measurement, cubic feet | 75/12 | 102/3 |
| Code. | Phyllopoda | Phyllornis |
| Lavatory with Wall Hangers and | \$20.25 | 25.25 |
| Shipping weight, lbs | 150 | 190 |

One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$\dagger$ 1098.C.
Porcelain Enameled Inside Lavatory with Slab, Oval Bowi, Overflow and Back all in one piece, with Brackets; Nickel-Plated No. 0 Monarch Pattern Fuller Basin Cocks; Nickel-Plated Chain Stay and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall with Wheel Handle Supply Valves.


## PORCELAIN ENAMELED LAVATORY.


$\dagger$ 1100.C.
Porcelain Enameled Inside Lavatory with Slab, D Pattern Bowl, Back and Overflow all in one piece, with Concealed Wall Hanger; Nickel Plated No. 2 Fuller Basin Cocks; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall.Physique
$19 \times 24$
Size, inch ..... $12 \times 15$
Height of back, inch ..... 10
Lavatory complete as described. ..... $\$ 17.75$
Shipping weight, lbs ..... 160
Shipping measurement, cubic feet ..... $91 / 2$
Code. Physodie
Lavatory with Wall Hanger and Overflow Strainer only ..... $\$ 11.00$
Shipping weight, lbs ..... 150If enameled all over, add $\$ 2.75$.One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.



1103-C.
Porcelain Enameled Inside Corner Lavatory with Slab, D Pattern Bowl, Overflow and Back all in one piece; Nickel-Plated No. 4 Compression Basin Cocks with Cross Handles; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch Elliptical Trap to Floor; Nickel-Plated Supply Pipes to Floor with Stop Valves.
Code.

 ..... PhytalosLength on side, inch20
Size of Bowl, inch.... ..... $12 \times 15$
Height of back, inch ..... 10
Lavatory complete as described. ..... $\$ 21.50$
Shipping weight, lbs ..... 175
Shipping measurement, cubic feet ..... $72 / 3$
Code. Phytoses
Lavatory with Overflow Strainer only ..... $\$ 10.50$Shipping weight, lbs.160
$\dagger$ If Enameled all over, add $\$ 2.00$.
One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.



## 1104-C.

Porcelain Enameled Inside Lavatory with Slab, Bowl, Overflow and Back all in one piece, with Secret Brackets or Wall Hangers; Nickel-Plated No. 0 Monarch Pattern Fuller Basin Cocks; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; NickelPlated $11 / 2$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall with Cross Handle Supply Valves; Nickel-Plated Soap Dish.

| Code. | Piabile | Piabuque |
| :---: | :---: | :---: |
| Style. | 0val Bowl | D Buwl |
| Length, inch | 21 | 21 |
| Depth, inch. | 18 | 18 |
| Size of bowl, inch. | $12 \times 15$ | $12 \times 15$ |
| Height of back, inch. | 8 | 8 |
| Lavatory complete as described. | \$15.50 | 15.50 |
| Shipping weight, lbs. | 135 | 135 |
| Shipping measurement, cubic feet. | $41 / 3$ | 45/6 |
| Code. | Piacento | Piacerole |
| Lavatory with Wall Hanger, Soap Dish and Overflow Strainer only.. | \$7. 25 | 7.25 |
| Shipping weight, lbs..... | 120 | 120 |

† If Enameled all over, add \$2.75.
One in a case.

+ Carried in San Francisco only.


## PORCELAIN ENAMELED LAVATORY.


$\dagger 1105-\mathrm{C}$.

Porcelain Enameled Inside Corner Lavatory with Slab, D Pattern Bowl, Overflow and Back all in one piece, with Concealed Wall Hangers; Nickel-Plated No. 0 Fuller Basin Cocks; NickelPlated Overflow Strainer and Chain; Nickel-Plated Waste Plug and Coupling with Rubber Stopper; Nickel-Plated $1 \frac{1}{2}$-inch Adjustable P Trap; Nickel-Plated Supply Pipes to Wall. Piacular
Code
Code ..... 19
Size of bowl, inch ..... $11 \times 15$
Height of back, inch ..... 8
Lavatory complete as described ..... \$14.50
Shipping weight, lbs ..... 128
Shipping measurement, cubic feet ..... $65 / 12$
Code ..... Piaculous
Lavatory with Wall Hangers and Overflow Strainer only ..... \$8.25
Shipping weight, lbs ..... 118
One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$1107=C$.
Porcelain Enameled Inside Corner Lavatory with Slab, Bowl, Overflow and Back all in one piece, with Concealed Wall Hangers; Nickel-Plated Doherty Self-Closing Basin Cocks; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 2$-inch P Trap to Wall; Nickel-Plated Supply Pipes to Wall with Cross Handle Supply Valves; Nickel-Plated Soap Dish.


One in case.

## PORCELAIN ENAMELED LAVATORY.



1108-C.

Porcelain Enameled Inside Lavatory with Slab, Oval Bowl, Overflow and Back all in one piece, with Secret Brackets or Wall Hanger; Nickel-Plated No. 0 Fuller Basin Cocks, Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated 11/4-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall; Nickel-Plated Soap Dish.
Code ..... Piafarian
Length, inch ..... 19
Depth, inch. ..... 19
Size of bowl, inch ..... $11 \times 14$
Height of back, inch. ..... 6
Lavatory complete as described ..... $\$ 12.50$
Shipping weight, lbs. ..... 85
Shipping measurement, cubic feet. ..... 35/6
Code ..... Piaffiat
Lavatory with Wall Hanger, Soap Dish and Overflow Strainer only ..... \$6.50
Shipping weight, lbs ..... 75
$\dagger$ If Enameled all over, add \$2.50. If with Brackets in place of Wall Hangers, add $\$ 0.50$.

One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.



1111-C.

Porcelain Enameled Inside Lavatory with Slab, Oval Bowl, Overflow and Back all in one piece, with Concealed Wall Hangers; Nickel-Plated No. 0 Fuller Basin Cocks; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 4$-inch Adjustable P Trap to Wall; Nickel-Plated Supply Pipes to Wall; Nickel-Plated Soap Dish.
Code. Piaffeur
Length on sides, inch. ..... $16^{1 / 2}$
Size of bowl, inch. ..... 11x14
Height of back, inch ..... 6
Lavatory complete as described ..... \$13.00
Shipping weight, lbs. ..... 85
Shipping measurement, cubic feet. ..... $45 / 12$
Code. ..... Piagando
Lavatory, with IVall Hangers, Soap Dish and Overflow Strainer only. ..... $\$ 7.00$
Shipping weight, lbs. ..... 75
$\dagger$ If Enameled all over, add $\$ 2.00$.
One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


1112.C.

Porcelain Enameled Inside Lavatory, with Slab, Round Bowl, Overflow and Back all in one piece; Nickel-Plated No. 0 Cross Handle Compression Basin Cocks; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated 11/4-inch Adjustable S Trap to Floor; Nickel-Plated Supplies to Floor.
Code ..... Piagarla
Length of back, inch ..... 15
Diameter of bowl, inch ..... 12
Height of back, inch ..... 6
Lavatory complete as described. ..... \$10.25
Shipping weight, lbs ..... 50
Shipping measurement, cubic feet ..... 21/4
Code ..... Piagasse
Lavatory with Overflow Strainer only ..... $\$ 5.00$
Shipping weight, lbs ..... 40

## PORCELAIN ENAMELED LAVATORY.


1113.C.

Porcelain Enameled Inside Corner Lavatory with Slab, Round Bowl, Overflow and Back all in one piece; Nickel-Plated No. 0 Compression Basin Cocks with Cross Handles; Nickel-Plated Overflow Strainer and Chain; Nickel-Plated Waste Plug with Rubber Stopper; Nickel-Plated $11 / 4-$ inch Adjustable S Trap to Floor; Nickel-Plated Supply Pipes to Floor.
Code ..... Piaghero
Length on sides, inch ..... 15
Diameter of bowl, inch. ..... 12
Height of back, inch. ..... 6
Lavatory complete as described ..... $\$ 10.25$
Shipping weight, lbs ..... 65
Shipping measurement, cubic feet ..... 31/12
Code ..... Piagnone
Lavatory with Overflow Strainer only ..... $\$ 5.00$
Shipping weight, lbs ..... 55

## PORCELAIN ENAMELED SHIP LAVATORIES.


+1116 - C.
Porcelain Enameled All-Over Ship Lavatory and Receptor, with Slab, Splash Preventive Bowl and Back all in one piece, on Concealed Wall Hanger; Nickel-Plated Chain Stay, Chain and Waste Plug, with Rubber Stopper; NickelPlated Soap Dish.Width, inches17
Depth, inches ..... 17
Bowl, inches. ..... $111 / 2$
Height of back, inches ..... $31 / 2$
Complete as described ..... $\$ 13.50$
Weight each, lbs ..... 140

$\dagger 1117$ -
Porcelain Enameled All-Over Corner Ship Lavatory and Receptor, with Slab, Splash Preventive Bowl and Back all in one piece, on Concealed Wall Hangers; Nickel-Plated Chain Stay, Chain and Waste Plug, with Rubber Stopper; Nickel-Plated Soap Dish.
Code........................................... Piallatore
Length on side, inches..................... $121 / 2$

Height of back, inches......................... $31 / 2$
Complete as described...................... $\$ 13.50$
Weight each, lbs................................ 130

Either of above can be furnished enameled inside only for $\$ 11.00$.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORIES.




#### Abstract

1114-C.

Porcelain Enameled Lavatory with Slab, Bowl, Overflow and Back, all in one piece; NickelPlated Overflow Strainer; cut for Hot and Cold Water and Regular Pattern Basin Plug.

Length of Back, $131 / 2$ inches. Height of Back, $31 / 2$ inches. Diameter of Bowl, 12 inches. Code Piagnoxus

Each. $\$ 4.00$ Shipping weight, lbs 35


One in a case.

$1115 \cdot \mathrm{C}$.
Porcelain Enameled Inside Corner Lavatory with Slab, Bowl, Overflow and Back all in one piece; Nickel-Plated Overflow Strainer. Cut for Hot and Cold Water and Regular Pattern Basin Plug.

Length of Side, 12 inches. Height of Back, $31 / 2$ inches. Diameter of Bowl, 12 inches.
Code.
Piagnure
Each
Shipping weight, lbs.

## PORCELAIN ENAMELED PRISON LAVATORIES.



+ 1118.C.
Porcelain Enameled Inside Prison Lavatory with Slab, Bowl, Overflow ard Back all in one piece; Nickel-Plated No. 1 Compression Basin Cock and Waste Plug with Rubber Stopper.

Length, 15 inches. Height of Back, 3 inches. Bowl, $101 / 2 \times 12$ inches.

| Code | Piallona | Code. | Piamater |
| :---: | :---: | :---: | :---: |
| Lavatory complete as described. | \$5.00 | Lavat | \$3.75 |
| Shipping weight, 35 pounds. |  |  |  |


$\dagger 1120 . \mathrm{C}^{\circ}$.
Porcelain Enameled One-Piece Prison Lavatory with Overflow, Rubber Stopper and IVaste Outlet threaded for Iron Pipe.

Length of Back, 12 inches. Height of Back, 4 inches.

$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$1124-\mathrm{C}$.

Porcelain Enameled Exterior Sectional Lavatory, with Slab, Bowl, Back, Overflow and Apron of each section all in one piece, with Enameled Brackets; Nickel-Plated Union Strips, Waste Plugs, Couplings, Chain Stays, Chains and Rubber Stoppers; Nickel-Plated No. 4 Fuller Basin Cocks; Supply Pipes; Continuous Waste and Vented S Trap; Nickel-Plated Soap Dishes.


## PORCELAIN ENAMELED LAVATORY.


† 1126-C.

Porcelain Enameled Exterior Lavatory with one Sink Section, Slab, Bowl, Overflow and Apron of each section all in one piece, separate Porcelain Enameled Backs and Brackets; Nickel-Plated Union Strips, Waste Plugs, Couplings and Rubber Stoppers; Nickel-Plated Fuller Bibbs and Flanges; No. 0 Fuller Basin Cocks; Supply Pipes; Continuous Waste and Vented S Trap; Nickel-Plated Soap Dishes.
Code Pianograph
Size of each section, inches ..... $18 \times 24$
Size of Bowls, inches ..... $12 \times 15$
Size of Sink, inches. ..... 18x24
Height of Back, inches ..... 12
Width of Apron, inches ..... 5
Three sections complete as described. ..... $\$ 69.00$
Shipping weight of three sections, lbs ..... 367
Code Pianospiel
Three sections with Backs, Union Strips, Brackets, Overflow Strainers and Soap Dishes only ..... $\$ 46.50$
Each additional section with Back, Union Strip, Brackeı, Overflow Strainer, Plug and Soap Dish only ..... 15.50
Basin Cocks, Supply Pipes and Waste for each additional Lavatory section ..... 7.25
Bibbs and Waste for each additional Sink section ..... 4.75
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$1128 . \mathrm{C}$.

Porcelain Enameled Exterior Double Sectional Lavatory, with Slab, Bowl, Overflow and Apron of each section all in one piece, Painted or Bronzed Brackets to Floor; Nickel-Plated Waste Plugs, Couplings and Rubber Stoppers; Nickel-Plated Union Strips; Thatcher Pattern Self-Closing Basin Cocks; Continuous Waste and S Trap.

| Code. | Pianotype | Piantale |
| :---: | :---: | :---: |
| Size, inches. | 18x24 | 22x27 |
| Size Bowl, inches.. | 12x15 | $12 \times 15$ |
| Width of Apron, inches. | 5 | 5 |
| Four Double Section Lavatory complete as described | \$190.80 | 210.80 |
| Shipping weight, lbs |  |  |
| Code. | Piantarlo | Pianura |
| Four Double Section Lavatory with Legs, Union Strips and Soap Dishes only.. | \$124.00 | 144.00 |
| Each additional Double Section with Legs and Union Strips only ................. | 31.00 | 36.00 |
| Basin Cocks, Pipes ald Waste for each additional Double Section. | 15.25 | 15.25 |
| Add for each Double Section enameled all | 5.00 | 5.50 |

## PORCELAIN ENAMELED LAVATORY.


$\dagger 1130-\mathrm{C}$.
Porcelain Enameled Exterior Double Lavatory, with Slab, Bowls, Back and Apron all in one piece, with Concealed Wall Hanger; Nickel-Plated Torrance Pattern Fuller Basin Cocks, with China Handles and Indexes; Nickel-Plated Double Shampoo Cock, with China Handles; Nickel-Plated Imperial Waste with China Indexes; Nickel-Plated Supply Pipes, Elliptical Traps with Wastes and Vents to IVall; Nickel-Plated Soap Dishes.
Code. Pianuzzo
Size, inches ..... $22 x 38$
Bowl, inches ..... 12x15
Back, inches ..... 12
Width of Apron, inches ..... 5
Lavatory complete as described. ..... $\$ 82.50$
Code ..... Piarder
Lavatory with Wastes and Soap Dishes only ..... $\$ 37.00$
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$\dagger 1132$ C.

Porcelain Enameled Inside Sectional Lavatory, with Slab, Bowl and Overflow of each section all in one piece, Separate Enameled Backs; Painted or Bronzed Brackets; Nickel-Plated Union Strips; Waste Plugs; Couplings and Rubber Stoppers; Nickel-Plated Doherty Pattern Self-Closing Basin Cocks; Supply Pipes; Continuous Waste and Vented S Trap; Nickel-Plated Soap Dishes.

| Code. | Piastrella | Piastrone |
| :---: | :---: | :---: |
| Size, inches. | $16 \times 20$ | 18x24 |
| Size of Bowl, inches. | 11x14 | $12 \times 15$ |
| Height of Back, inches..................................... ............................ | 12 | 12 |
| Four Section Lavatory complete as described...................................... | \$78.00 | 86.00 |
| Shipping weight, lbs................................................................ ..... | 350 | 420 |
| Code. | Piatoris | Piatricem |
| Four Section Lavatory with Backs, Soap Dishes and Brackets only .......... | \$40.00 | 48.00 |
| Each additional section, with Back, Soap Dish and Bracket only............... | \$10.00 | 12.00 |
| Basin Cocks, Pipes and Waste for each additional section....................... | 8.75 | 8.75 |

$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED LAVATORY.


$\dagger 1135-\mathrm{C}$.
Porcelain Enameled Inside Sectional Lavatory, with Slab, Bowl and Overflow of each section all in one piece, Separate Porcelain Enameled Backs and Right Hand End Piece; Painted or Bronzed Brackets; Nickel-Plated Waste Plugs, Couplings and Rubber Stoppers; Nickel-Plated Union Strips; No. 6 Fuller Pattern Basin Cocks with Jewel Cups; Nickel-Plated Supply Pipes; Continuous IVaste and Vented S Trap; Nickel-Plated Soap Dishes.

| Code. | Piattello | Piattono |
| :---: | :---: | :---: |
| Size, inches. | 16x20 | $18 \times 24$ |
| Bowl, inches | 11x14 | $12 \times 15$ |
| Back, inches. | 12 | 12 |
| Two Section Lavatory complete as described. | \$51.00 | 55.00 |
| Shipping weight, lbs. | 184 | 221 |
| Code. | Piauter | Piavimus |
| Two Section Lavatory with Backs, Brackets and Soap Dishes only | \$22.00 | 26.00 |
| Each additional section with Back, Bracket and Soap Dish only . | 10.00 | 12.00 |
| Basin Cocks, Supply Pipes and Waste for each additional section... | 12.75 | 12.75 |

+ Carried in San Francisco only.


## PORCELAIN ENAMELED LAVATORY.



## $\dagger 1137-\mathrm{C}$

Porcelain Enameled Inside Sectional Lavatory, with Slab, Bowl and Overflows of each section all in one piece ; Separate Porcelain Enameled Backs and Left-Hand End Piece, Painted or Bronzed Brackets; Nickel-Plated Waste Plugs, Coupling and Rubber Stoppers; Nickel-Plated Union Strips; No. 6 Fuller Pattern Basin Cocks with Jewel Cups; Nickel-Plated Supply Pipes; Continuous Waste and Vented S Trap; Nickel-Plated Soap Dishes.


## PORCELAIN ENAMELED LAVATORY.


1138.C.

Porcelain Enameled Inside Double Sectional Lavatory, with Slab, Bowl and Overflow of each section in one piece; Porcelain Enameled Soap Dishes; Bronzed Iron Brackets to Floor; Nickel-Plated Union Strips; Doherty Pattern Self-Closing Basin Cocks; Continuous Waste and S Trap; Nickel-Plated Waste Plugs, Couplings and Rubber Stoppers.

Code Picarote Picarroso
Four Double Section Lavatory with Union Strips, Soap Dishes and Legs only
Each additional Double Section with Union Strips, Soap Dish and Legs only ..... $\$ 20.00$ ..... 24.00
Basin Cocks and Waste for each additional section ..... 12.50 ..... 12.50
If Enameled all over add for each double section. ..... 5.00 ..... 5.00

## PORCELAIN ENAMELED WASH SINKS.


$\dagger$ 1140-C.

Porcelain Enameled Roll Rim Wash Sink on Brackets; Porcelain Enameled Back with NickelPlated Union Strip and Soap Dish; Nickel-Plated Overflow Strainer Waste Plug, Coupling and Rubber Stopper; Nickel-Plated Fuller Bibbs with Flanges, and P Trap with Waste and Vent to Wall.
Code. Piccavate
Length over Rim, inches ..... 60
Width over Rim, inches ..... 18
Depth, inches ..... 6
Back, inches ..... 12
Sink complete as described ..... $\$ 33.50$
Shipping weight, lbs ..... 350
CodeSink with Back, Union Strip, Brackets, Soap Dish, Overflow Strainer, and Plug only$\$ 27.00$
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED WASH SINKS.



## 114.c.

Porcelain Enameled Inside Roll Rim Sectional Wash Sink, Porcelain Enameled Back with Union Strips, Iron Brackets, Soap Dishes, Nickel-Plated Waste Plug and Coupling, Fuller Bibs with Flanges and Vented P Trap.

Width inside, 14 inches ; width over rim, 18 inches; back, 12 inches.


Add for Nickel-Plated Ribs as shown, each, $\$ 1.25$.

There is approximately one Bibb for every thirty inches in length.
Add for Nickel-Plated Vented P Trap as shown, $\$ 5.00$.
Maya be furnished in longer lengths, also in painted or galvanized finishes if desired. Prices quoted upon application.

In ordering specify whether wanted with or without fittings shown.

## PORCELAIN ENAMELED WASH SINKS.



Porcelain Enameled Inside Corner Section for Roll Rim Wash Sink, with 12 -inch Enameled Back.

| Code. .................... Pickthank |  |
| :--- | :---: | :---: |
| Each........................... $\$ 25.00$ |  |
| Weight, each............. | $\ldots$ |

Length of inside corner section of back, 4 feet; or 2 feet from either end to corner.
Other dimensions same as given on regular sectional Wash Sinks.

## $1145 \cdot \mathrm{C}$

Porcelain Enameled Outside Corner Section for Roll Rim Wash Sink, with 12-inch Enameled Back.

| Code ........ .................. Picktooth |
| :--- |
| Each........................... $\$ 25.00$ |
| Weight each, lbs .......... |

Length of outside corner section at front, 4 feet; or 2 feet from either end to corner.

Other dimensions same as given on regular sectional Wash Sinks.

## PORCELAIN ENAMELED WASH SINKS.


1149.C.

Porcelain Enameled Inside Corner Wash Sink on Adjustable Iron Frames, with Roll Rim, Porcelain Enameled Back; Nickel-Plated Waste Plug and Coupling; Soap Dishes; Nickel-Plated Fuller Bibs with Flanges and Vented P Trap.

## Dimensions:

Width of trough over all, 18 inches; width inside, 14 inches; height of back, 12 inches; length of inside corner section, 4 feet, or 2 feet from corner to each end.
Code. ..... Picnostilo
Sink complete as described (length, corner to each end, 7 feet) ..... $\$ 95.50$Shipping weight, lbs
$\qquad$
Code.Pienotico
Sink less Faucets and Trap ..... $\$ 83.00$
Can be furnished in longer lengths; also in painted or galvanized finishes if desired. (Prices quoted upon application.)

## PORCELAIN ENAMELED WASH SINKS.


1151.C.

Porcelain Enameled Wash Sink on Adjustable Iron Frames, with Roll Rim, Porcelain Enameled Back; Nickel-Plated Waste Plug and Coupling; Soap Dishes; Nickel-Plated Fuller Bibbs with Flan'es and Vented P Trap.

## Dimensions :

Width of trough over all, 18 inches; width inside, 14 inches; height of back, 12 inches; length of outside corner section, 4 feet, or 2 feet from corner to each end.

> Code.
> Picolapte
> Sink complete as described (length, corner to each end, 7 feet)................................. $\$ 95.50$
> Shipping weight, lbs.
> Code
> Piconero
> Sink, less Faucets and Trap............................................................................. $\$ 83.00$

Can be furnished in longer lengths; also in painted or galvanized finishes if desired. (Prices quoted upon application.)

## PORCELAIN ENAMELED DRINKING FOUNTAINS.



Porcelain Enameled All Orer Alcore Drinking Fountain with Nickel-Plated Boston Pattern SelfClosing Faucet, Open Strainer and Waste Connection to W'all.

For use in office buildings, schools, public institutions, hotels, etc.

## Dimensions :

Height, 22 inches; width, $123 / 4$ inches.
Recess in wall, $31 / 2$ inches; front to back, $101 / 2$ inches.
Code. ..... Picorant
Complete as described ..... $\$ 12.00$
W'eight each, lbs ..... 32
Shipping measurement, cubic feet .....
Code. ..... Picosas
Each, less Faucet ..... $\$ 10.00$

Porcelain Enameled All Over Flat Back Drinking Fountain, with Concealed Wall Hanger and Nickel-Plated Boston Pattern Self-Closing Faucet, Open Strainer and Waste Connection to Wall.

## Dimensions :

Height, 22 inches; width, $121 / 2$ inches; depth from front to back, 9 inches.
Code ..... Picotadas
Complete as described ..... $\$ 10.00$
Weight each, lbs ..... 28
Shipping measurement, cubic feet.

$\qquad$ .....
Code ..... Picotazos
Each, less Faucet ..... $\$ 8.00$


## PORCELAIN ENAMELED DRINKING FOUNTAINS.



1156 (C.
Porcelain Enameled Drinking Fountain, with Nickel-Plated Water Jet Cup.
For use in schools, public institutions and all places where drinking cups_would not be considered sanitary.

## Dimensions:

Outside diameter of bowl, $131 / 2$ inches; depth_of bowl, 4 inches.


If with Concealed Galvanized Supply and Waste Pipes, as shown in cross section view 1157 -C, add $\$ 2.50$.

## FOLDING SHIP LAVATORY.


†1160-C. Open.

† 1160-C. Closed.

Quartered Oak Cabinet with French Plate Mirror; Heavy Zinc Water Tank and Galvanized Iron Slop Receiver; Nickel-Plated Brass Self-Closing Faucet; Vitreous China Wash Bowl and Soap Cups.

## Dimensions :

Height, 6 feet, 3 inches; width. $21 \frac{1}{2}$ inches; depth front to back when closed, 11 inches; when open, 23 inches; capacity of water tank, $31 / 2$ gallons.
 One in a case.
$\dagger$ Carried in San Francisco only.

## FOLDING SHIP LAVATORY.



Mahogany Case, White Porcelain Oval Basin; Nickel-Plated Copper Lining; Soap Cup and Brush Holder; Nickel-Plated Brass Pump, Towel Rack and Trimmings.

Supply for Lavatory may be taken from tanks under floor, or, if on fresh water, may be taken from directly outboard.

The waste may discharge either into bowls of water-closet, waste tank, or directly overboard.

## Dimensions :

Height, 20 inches; width, 19 inches; depth, front to back when closed, 6 inches; when open, 18 inches; oval basin, $12 \times 15$ inches.
Code.............................................................................................................. Pictuma
Complete as described ...................................................................................... $\$ 60.00$
Shipping weight each, lbs56
Can be furnished in any wood desired.
$\dagger$ 116t-C. (Not shown.)
Same fixtures as 1162 -C with Nickel-Plated Self-Closing Faucet instead of Pump.
To be supplied from overhead tank or pressure.


[^13]
## FOLDING SHIP LAVATORY.


$+1166 . \mathrm{C}$.

[^14]
## Dimensions :

Height of case over all, $191 / 2$ inches; width of case, 15 inches; depth of case, front to back, $31 / 2$ inches; depth over all to face of basin, $51 / 2$ inches ; depth over all when open, $161 / 2$ inches; diameter of basin, 10 inches.
Code Picudilla
Lavatory complete as shown and described ..... $\$ 52.50$
Shipping weight, lbs ..... 39Shipping measurement, cubic feet
One in a case.
$\dagger$ 1168-C (not shown).
Same fixture as 1166-C with Nickel-Plated Self-Closing Faucet, instead of Pump.
To be supplied from overhead tank or pressure.
Code. ..... Picudos
Each. ..... $\$ 37.50$
Shipping weight, lbs. ..... 35

[^15]
## FULLER BASIN COCKS.


1170.C.

Nickel-Plated "Torrance" Pattern Fuller Basin Cock, with China Handle and Index.

| Code | Pidange |
| :---: | :---: |
| Each | \$3.00 |
| Weight each, lbs. | $13 / 4$ |



Nickel-Plated ' $M$ Ionarch'" Pattern Fuller
Basin Cock.


Six in a box.

Four in a box.

Sent in pairs of Right and Left Hand unless otherwise ordered.

The Coupling Nuts and Inlets on above Basin Cocks are bored out to permit of making slip joint connection with $1 / 2$-inch O. D. Nickel-Plated Tubing for Supply Pipes.

FULLER BASIN COCKS.


All on this page packed six in a box.
Sent in pairs of Right and Left Hand unless otherwise ordered.
The Coupling Nuts and Inlets on above Basin Cocks are bored out to permit of making slip joint connection with $1 / 2$-inch O. D. Nickel-Plated Tubing for Supply Pipes.
$\dagger$ Carried in San Francisco only.

FULLER BASIN COCKS.


Nickel-Plated Fuller Basin Cock.



Nickel-Plated Fuller Basin Cock.
Code.
Number
Piedino
..................................................... 4
Each.................................................... \$1.75
Weight per dozen, lbs........................... 26

$\dagger$ 1178-C.
Nickel-Plated Fuller Basin Cock.
Code
Number
Piedness

Each
5
$\$ 2.20$
115/16

† 1179-C.
Nickel-Plated Fuller Basin Cock, with China Handle and Index.
Code
Number す-C
Each.................................................. \$3.00
Weight per dozen, lbs... ...................... 15/16

All on this page packed six in a box.
Sent in pairs of Right and Left Hand unless otherwise ordered.
The Coupling Nuts and Inlets on above Basin Cocks are bored out to permit of making slip joint connection with $1 / 2$-inch O. D. Nickel-Plated Tubing for Supply Pipes.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers.

## FULLER BASIN COCKS.



Sent in pairs of Right and Left Hand unless otherwise ordered.
The Coupling Nuts and Inlets on above Basin Cocks are bored out to permit of making slip joint connection with $1 / 2$-inch O. D. Nickel-Plated Tubing for Supply Pipes.

+ Carried in San Francisco only.

FULLER DOUBLE SHAMPOO COCK.


Nickel-Plated Fuller Double Shampoo Cock and Sprinkler, without Rubber Tube.

Code............. .......................................................... Pienotto
Each....................................................................... \$8.75
Weight each, lbs..................................................... . 4
One in a box.

SWING BASIN COCKS.


Nickel-Plated Swing Basin Cock.



Nickel-Plated Swing Basin Cock.

Code.
Number
Piepbock
Each.
4

Weight per dozen, lbs....................... 16

One dozen in a box.

+ Carried in San Francisco only.


## COMPRESSION BASIN COCKS.



Nickel-Plated Compression Basin Cock with Tee Handle.



Nickel-Plated Compression Basin Cock with Tee Handle.



Nickel-Plated Compression Basin Cock with Cross Handle.



Nickel-Plated Compression Basin Cock with Large Tube and Cross Handle.

Code
Piertagos

Number
Each ..... $\$ 1.25$
Weight per dozen, lbs ..... $161 / 2$

## COMPRESSION BASIN COCKS.



Nickel-Plated Compression Basin Cock with Large Tube, Cross Handle and Stuffing Box.
Code.
Piesma
Number. $41 / 2 \cdot \mathbf{X}$
Each
$\$ 1.50$
Weight per dozen, lbs.


Nickel-Plated Low Pattern Compression Basin Cock with China Index.
Code.
Number

## Each

Weight per dozen, lbs
Six in a box.
$\dagger$ Carried in San Francisco only.

$\dagger$ 1198-C.
Nickel-Plated "Monarch" Pattern Compression Basin Cock, with Cross Handle.
Code...................................................... Fietage
Number...................................................... 1-M
Each...................................................... \$1.00
IVeight per dozen, lbs.............................. 15
Six in a box.

The Coupling Nuts and Inlets on Basin Cocks shown on this page are bored out to permit of making slip joint connection with $1 / 2$-inch O. D. Nickel-Plated Tubing for Supply Pipes.

## SELF-CLOSING BASIN COCKS.

BROUGHTON


Nickel-Plated Improved Broughton Self-Closing Basin Cock.

| Code................. | Pietiner | Pietiniez |
| :--- | :---: | :---: |
| Style ..............Brass Nickel-Plated | Solid Silver Metal |  |
| Each.............. | $\$ 4.00$ | 6.00 |
| Wg.t. perdz., lbs.. | 32 | 35 |
| Two in a box. |  |  |

The Broughton Self-Closing Work has been in use for several years. Many of the largest hotels and public buildings in the United States are equipped with these goods.

They have the merits of Great Strength, Durability and Finest Workmanship.
$\dagger$ Carried in San Francisco only.

THATCHER.


Nickel-Plated Thatcher Pattern Self-Closing Basin Cock with China Handle.

Six in a hox.

Sent in pairs of Right and Left Hand, unless otherwise ordered.

## SELF-CLOSING BASIN COCKS.



Nickel-Plated "Telegraph" Self-Closing Basin Cock with Large Tube.
Code. Pietrella
Number
Each \$1.70
W'eight per dozen, lbs
12


Nickel-Plated " Moore's" Self-Closing Basin Cock.

Code.
Pietruzza
Each
$\$ 3.00$
Weight per dozen, lbs.


Nickel-Plated "Doherty" Self-Closing Basin Cock.

Code Pietrolina
Number 2
Each
$\$ 2.25$
W'eight per dozen, lbs......................... 22


Nickel-Plated "Milwaukee" Self-Closing Basin Cock with Crown Handle and China Index.

Code.
Pieux
Each
$\$ 2.75$
Weight per dozen, lbs...... ... ............ 25
$\dagger$ Carried in San Francisco only.

PANTRY COCKS.


1208-C.
Nickel-Plated Compression Pantry Cock.
Code
Number
Piezometer
Each 1
$\$ 2.10$
Weight per dozen, lbs.
$161 / 2$
Two in a package.
$\dagger$ Carried in San Francisco only.


## LAVATORY SUPPLY PIPES.

BRASS NICKEL-PLATED.


1210-C.

Nickel-Plated Lavatory Wall Supply Pipe. Iron Pipe Size Brass Tubing.


1211-C.

Nickel-Plated Lavatory Wall Supply Pipe with Wheel Handle Valve.


1212-(.

Nickel-Plated Lavatory Wall Supply Pipe with Cross Handle Valve.
1210-C.
$3 / 8$-inch Iron Pipe Size, with Slip Joint to take Tail Piece on Basin Cock.

| Code | Pifferato |
| :---: | :---: |
| Numb | 3 |
| Each. | \$1.00 |
| Weigh | 3/4 |

## 1211-C and 1212-c.

$3 / 8$-inch or $1 / 2$-inch Iron Pipe Size Connection at Wall with $1 / 2$-inch O. D. Nickel-Plated Flexible Tubing that forms Slip Joint with Basin Cock.

Wheel Handle.
Code.
Number
Each.
Weight each, lbs.

## Pifferello

4-W $3 / 8$-inch $\$ 1.50$ 3/4

Piffero
4-W $1 / 2$-inch
1.50

1

Cross Handle.

| Pifiaran | Pifiarias |
| :---: | :---: |
| t-C $3 / 8$-inch | $\mathbf{4 - C} 1 / 2$-inch |
| 1.50 | 1.50 |
| $3 / 4$ | 1 |

For Supply Valves only, see pages 102 and 103.
Wheel Handle Supply V'alves with Plumber's name on wheel can be furnished. Prices quoted upon application.

## LAVATORY SUPPLY PIPES.

```
MADE FROM IRON PIPE SIZE BRASS TUBING.
```


1216.c.

1217. C .

Nickel-Plated Lavatory Floor Supply Pipe. $3 / 8$-inch Iron Pipe Size with Slip Joint to take Tail Piece on Basin Cock.

Nickel-Plated Floor Supply Pipe with Wheel Handle Stop. $3 / 8$-inch Iron Pipe Size, with Slip Joint to take Tail Piece on Basin Cock.
Code. PigamonNumber$\stackrel{2}{2}$
Length, inches. ..... 28
Each. ..... $\$ 2.00$
Weight each, lbs. ..... $15 / 8$

[^16]
## "MENLO" LAVATORY WASTE.


1220.C.

Nickel-Plated "Menlo" Lavatory Waste.

| Code. | Pigeonry | Piggeries |
| :---: | :---: | :---: |
| Style... | Nickel-Plated | Nickel-Plated with China Index |
| Each. | \$4.00 | 4.50 |
| Weight each, lbs. | $37 / 8$ | 4 |

One in a box.
The "Menlo" Waste may be used with any of our Traps.

## STRAIGHT LAVATORY WASTE.

## BRASS NICKEL-PLATED.

To the Floor, with Rubber Stopper.
Code. PigiarleSize, inches$11 /$
Length over all, inches ..... 25
Each ..... $\$ 1.50$
Weight each, lbs ..... $13 / 4$

[^17]
## ELLIPTICAL ADJUSTABLE LAVATORY TRAPS.



$$
\dagger \text { † 122t-c. }
$$

Nickel-Plated Elliptical Trap to the Floor.

| Code................. | Pigliando | Pigliassi |
| :--- | :---: | :---: | :---: |
| Size, inches...... | $\mathbf{1}^{1 / 4}$ | $\mathbf{1 1 / 2}$ |
| Length over all, in... | 25 | 25 |
| Each ............. | $\$ 3.25$ | 4.00 |
| lVeight each,lbs. | 4 | $43 / 8$ |

## PLAIN LAVATORY TRAPS.

## CAST BRASS POLISHED AND NICKEL-PLATED.


$\dagger 1230 . \mathrm{C}$.
Plain Nickel-Plated Lavatory P Trap.

$\qquad$

Size, inches

| Pignatta | Pignattini | Pignerabis |
| :---: | :---: | :---: |
| $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| $\$ 3.00$ | 3.75 | 7.50 |
| 2 | $21 / 2$ | $41 / 2$ |


$\dagger 1231$ -.
Plain Nickel-Plated Lavatory P Trap Vented.

| Code | Pigneranda | Pigneratio |
| :---: | :---: | :---: |
| Size, inches.................... | $11 / 2$ | 2 |
| Each. | \$3.75 | 8.00 |
| Weight each, lbs............. | 41/4 | 8 |



Plain Nickel-Plated Lavatory S Trap.
Code.

Size, inches..........
Each.................
Weight each, lbs..

| Pignerator | Pigneravit | Pignerawl |
| :---: | :---: | :---: |
| $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| $\$ 3.25$ | 4.00 | 7.50 |
| $23 / 4$ | $31 / 4$ | 6 |

$\dagger$ Carried in San Francisco only.

## H. M. \& S. ADJUSTABLE LAVATORY TRAPS.

BRASS, POLISHED AND NICKEL-PLATED

1235.C.

Adjustable Nickel-Plated Lavatory P Trap.


Pigneres Pignolato
$11 / 4 \quad 11 / 2$
$\$ 2.00 \quad 2.25$
$13 / 4 \quad 23 / 4$


1236-C.
Adjustable Nickel-Plated Lavatory P Trap, Vented.



1237-C.
Adjustable Nickel-Plated Lavatory S Trap.
Code

Each
Pignorada
1 1 4
$\$ 2.25$
$25 / 8$
Pignoratif
$\mathbf{1} 1 / 2$
2.50
$31 / 4$
$11 / 2$
2.50

4

Pignuolo
Code.
Inches..................................................... 1 ½
Each................................................... $\$ 3.00$
Weight each, lbs
$33 / 4$

## PLAIN SINK AND CONTINUOUS WASTE TRAPS.

```
CAST BRASS POLISHED AND NICKEL-PLATED.
```

These Traps can be used with Continuous Waste shown on Page 359, or they can be applied to Kitchen Sinks by using Sink Connection, 1261-C.

$\dagger \mathbf{1 2 4 0} \mathbf{C}$.
Plain Nickel-Plated Sink P Trap.

| Code................ Pignuomic | Pignuoppe | Pignuoram |  |
| :--- | :---: | :---: | :---: |
| Size, inches........ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{Q}$ |
| Each.............. | $\$ 2.50$ | 3.25 | 7.00 |
| Weight each, lbs.. | $13 / 4$ | 2 | 4 |


$\dagger$ 1241.C.
Plain Nickel-Plated Sink P Trap, Vented.

| Code. | Pignuosa | Pignuosit |
| :---: | :---: | :---: |
| Size, inches. | $11 / 2$ | - |
| Each | \$3.75 | 8.00 |
| Wei | 33 | 71 |


$\dagger 12+2 \cdot \mathrm{C}$.
Plain Nickel-Plated Sink S Trap.

| Code $\ldots \ldots \ldots \ldots \ldots$ | Pignuppa | Pignurade | Pignureem |
| :--- | :---: | :---: | :---: |
| Size, inches........ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots$ | $\$ 2.7 .5$ | 3.50 | 7.00 |
| Weight each, lbs... | $21 / 4$ | $23 / 4$ | $51 / 2$ |



Plain Nickel-Plated Sink S Trap, Vented.


Size, inches............................ 11/2 ע
Each .............................. $\$ 4.00$. 8.00

Weight each, lbs..... ......... 4 8 One in a box.

## H. M. \& S. ADJUSTABLE SINK TRAPS.

POLISHED BRASS. NICKEL-PLATED.



1246-C.
Adjustable Nickel-Plated Sink P Trap.


The Cast Brass Collar on these Traps will fit the Coupling on all Cast Iron Sinks.

## CONTINUOUS WASTE PIPES.



1248-C.
Nickel-Plated Continuous Waste Pipes for Sectional Lavatories, Laundry Trays, Sinks, etc. Can be furnished with outlet at either end if so desired.

| Code | Pigotite | Pigozzo | Pigraberis |
| :---: | :---: | :---: | :---: |
| Size, inches | 111/4 | $11 / 2$ | 2 |
| Per Section. | \$2.00 | 2.25 | 3.00 |

Weight per section, lbs.
Continuous Waste Pipes can be furnished in any style or finish desired. Prices upon application.

## DIAMOND UNIVERSAL SINK TRAPS.

CLOSE GRAIN GREY CAST IRON. PAINTED RED. WITH BRASS TRAP SCREW.


$+1250-\mathrm{C}$.
IVith Flange.
Inlet Fits Sink Coupling. Outlet Threaded for Iron Pipe.
Code. $\qquad$ Pigrantes Pigrebunt
Inches. 11/4 $11 / 2$
Each. $\$ 0.75$
1.00

Weight each, lbs. $3^{1 / 4}$ $t$

$+1251 . \mathrm{C}$. Showing how Trap may be vented by using ordinary pipe fittings.

$\dagger 1252 . \mathrm{C}$. Threaded.
Outlet and Inlet Threaded for Iron Pipe.
Code................. Pigremus Pigresco Inches................. 11.4 1/1/2 Each................. $\$ 0.751 .00$ W'eight each, lbs., 31/8 35/8

The Diamond Universal Cast Iron Traps are designed to meet different requirements and to be as near universal as possible. They have all the good qualities of the brass trap, except in appearance. They are durable, clean and very neat looking. When the brass trap screw is removed, a sink collar will pass over the body of Trap. All threads are for $1 \frac{1}{4}$ or $11 / 2$ inch standard iron pipe fittings.

By the use of iron pipe fitting, a $3 / 4$ S or Full S Trap can be made. To vent any of the above styles, use Tees, taking vent out of top opening in Tee. See 1201-('.

OHIO SINK TRAPS.
ROUGH BRASS, NICKEL-PLATED.

$+1255-\mathrm{C}$.
Full S Trap.
Code Code..........................

Center to center, inches Length over all,
Each........................... \$2.00
Pigritor
$11 / 2$
$41 / 2$
24
$\$ 2.00$

Weight each, lbs.......... $25 / 8$ Weight each, pounds... 21/4 Weight each, lbs.......... $31 / 2$
These Traps are made of brass and nickel-plated, but not polished. They are fitted with a connection to go into the collar of cast iron sink. They are much stronger than lead traps and cost rery little more.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## LAVATORY PLUGS.



1260 ( ${ }^{\prime}$.
Brass with Rubber Stoppers. Finished NickelPlated Top Flange.

| Code | Pigstem |
| :---: | :---: |
| Each. | \$0.40 |
| Weight each, lbs. | 11/16 |

## SINK CONNECTIONS.



Brass Finished and Nickel-Plated for NickelPlated Sink Traps. 1/4-inch O. D. Tail Pieces.
Code Pigsteps
Each
$\$ 0.30$
Weight each, lbs............................................ 5/8

## SLIP JOINT LAVATORY PLUGS.



1262-C.
Slip Joint Lavatory Plug. Brass, Nickel-Plated all over. With Rubber Stopper. $1 \frac{1}{4}$-inch O. D. Tail Pieces, 2 inches long.

Code Pigsticker
$\$ 0.40$
$3 / 8$
Weight each, lbs................................ $3 / 8$

We can furnish Slip Joint Plugs with $11 / 4$-inch O. D. Tail Pieces, $4 \frac{3}{4}$ inches long, Nickel-Plated all over when desired.

In Orders and Specifications give Plate Numbers and Sizes.


## SLIP JOINT RINGS OR WASHERS.

RUBBER.


1275-C.
Feather Edge; for Supply Valves.
Code .................... Pihlite
Size, inch............... 1/2
Per dozen ............ $\$ 0.30$
Wtt. per gro., lbs... 3/8


1276-C.
Straight for Supply Valves
Code.
Size, inch.
Per dozen ........... $\$ 0.25$
W't. per gro., lbs...


1280-C.
For ${ }_{\text {a }}$ Traps or Waste Pipes.


Pikarden
Pikelin $11 / 4 \times 11 / 2 \times 3 / 1611 / 2 \times 13 / 4 \times 3 / 16$ $\$ 0.50$
0.50

Per dozen
$\qquad$
PIVt. per gro., lbs... 1 $1 \quad 1$

## LAVATORY AND BATH TUB WASTE WASHERS.

RUBBER


In Orders and Specifications give Plate Numbers.

$1282-\mathrm{C}$.

## LAVATORY WALL HANGERS AND CONCEALED BRACKETS.



Back of One-Piece Lavatory, showing part of Concealed Wall Hanger.

1285. C.

Concealed Wall Hanger for Lavatories. Plain Cast Iron.

| Code. | Pilanorum | Pilantium | Pilaremus | Pilaribus |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 20 | 24 | 27 | 30 |
| Each. | \$1.00 | 1.50 | 2.00 | 2.50 |

Weight each, lbs.


1287-C.
Showing Application of Secret Bracket.
Lavatories with Secret Brackets are made so that a board can be used behind the back if desired, thus obviating any trouble in finding studding to which brackets can be fastened.

## LAVATORY LEGS.

FOR PORCELAIN ENAMELED LAVATORIES.


Nickel-Plated Brạss Lavatory Leg and Frame with Round Tapered Cast Post and Cast Foot.
Code
Pilasses
Per pair................. ........................... \$9.00
Weight per pair, lbs
For use on 1070-C and 1072-C Lavatories.

Nickel-Plated Brass Lavatory Leg with Hexagon Cast Post and Cast Taper Foot.
Code Pilaster
Per pair $\$ 7.50$
Weight per pair, lbs.. 4
For use with one-piece Lavatories, supported on Concealed IVall Hangers.

The above Lavatory Legs are beautifully finished and are intended for use on Porcelain Enameled Lavatories only.
$\dagger$ Carried in San Francisco only.

## LAVATORY LEGS.

```
FOR MARBLE LAVATORIES. CAST BRASS, POLISHED AND NICKEL-PLATED.
```



Nickel-Plated Straight Lavatory Leg, with Doweled Top and Bottom.

Nickel-Plated Offset Lavatory Leg for 5-inch Aprons, with Doweled Top and Bottom and Apron Clamp.

| Code | Pilastrone | Code. | Pilatarum |
| :---: | :---: | :---: | :---: |
| Per pair. | \$8.75 | Per pair...................................... | \$12.00 |
| Weight per pair, lbs. | $\ldots$ | Weight per pair, lbs.. | $\ldots$ |

$\dagger$ Carried in San Francisco only.

## LAVATORY LEGS.

FOR MARBLE LAVATORIES. BRASS, POLISHED AND NICKEL-PLATED.


Nickel-Plated Straight Plain
Tube Lavatory Leg with Doweled Flanges on Both Ends.
Code........................
Pilateros
Per pair....................
$\$ 1.75$
Weight per pair, lbs.....

Nickel-Plated Offset Rope Tube Lavatory Leg with Claw Foot Base.

[^18]Per pair
$\$ 4.00$ Weight per pair, lbs.....
$\dagger$ Carried in San Francisco only.

## LAVATORY LEGS.

FOR MARBLE LAVATORIES WITH APRONS. BRASS, POLISHED AND NICKEL-PLATED

† 1298-C.

Nickel-Plated Offset Plain Tube Lavatory Leg for 5 -inch Aprons, with Claw Foot Base and Apron Clamp.


Nickel-Plated Offset Rope Tube Lavatory Leg for 5 -inch Aprons, with Claw Foot Base and Apron Clamp.

Code
Pilcrow
Per pair
Weight per pair, lbs
$\$ 4.00$
...
$\dagger$ Carried in San Francisco only.

## APRON WALL BRACKETS OR SUPPORTS.

BRASS, NICKEL-PLATED.


1301-C.
Nickel-Plated Apron IVall Bracket for 5 inch Aprons, with Doweled Top and Screw Holes on either side.
Code
Each.
Weight each, lbs.

Pildash
$\$ 0.65$
3/8


1302-C.
Nickel-Plated Apron Wall Bracket for 5 inch Aprons with Doweled Top and Screw Holes in Recess.
Code.
Each ........................... \$0.50
Each .....................

Twenty-four in a box.


Nickel-Plated Apron Wall Bracket for 5 inch Aprons with Doweled Top and Set Screw. For Recess Lavatories.

| Code | Pileoles | Pileolum |
| :---: | :---: | :---: |
| Style | Right | Left |
| Each | . $\$ 0.65$ | 6.5 |
| Weigh Sent | Righ ise | d Left red. |

## LAVATORY BRACKETS.

NICKEL-PLATED BRASS BRACE WITH NICKEL-PLATED STEEL TOPS.


1306-C.
Plain Pattern.


1307-C.
Rope Pattern.

Pileront $16 \times 18$
Size ........
Per pair$\$ 2.00$

Weight per pair, lbs............................. $31 / 5$

## STEEL LAVATORY BRACKETS.

## NICKEL-PLATED AND POLISHED



1310-C.
Nickel-Plated Steel Lavatory Bracket.

## Code

$\qquad$
$\qquad$ Pileworm
Number
Size, inches $\qquad$ 1618

Per pair 16x18
$\$ 1.70$

Weight per pair, lbs
Twelve pairs in a case.


1312-C.
Nickel-Plated Steel Lavatory Bracket.
Code.
Number
Size, inches......................................... 16x18
Per pair
$\$ 1.70$
Weight per pair, lbs $\qquad$ One pair in a package.

Above Brackets are made of heary Cold Rolled Steel, which is Electro Copper-Plated, then Nickel-Plated.


## LAVATORY BRACKETS.

HAMMOND DESIGN.

IRON PORCELAIN ENAMELED.

| Code........... | Pilger | Pilgerede | Pilgerhut | Pilgerstab |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Size, inches... | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 2}$ |
| Per pair........ | $\$ 1.50$ | 2.00 | 2.50 | 3.00 |
|  |  |  |  |  |
| BRASS NICKEL-PLATED. |  |  |  |  |
| Code........... | Pilgerwelt | Pilgerzug | Pilhagem | Pilharia |
| Size, inches... | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 2}$ |
| Per pair....... | $\$ 6.00$ | 8.00 | 10.00 | 12.00 |

## 1314-C.

In Orders and Specifications give Plate Numbers.

## LAVATORY BRACKETS.


1316. ('.

Nickel-Plated Brass Lavatory Bracket.


1318.1.

Nickel-Plated Cast Iron Lavatory Bracket.

| Code. | Pilidium |
| :---: | :---: |
| Number........................................ | 54 |
| Size, inches.................................... | 16x18 |
| Per pair. | \$1.50 |
| Weight per fair, lbs........................ | $\ldots$ |

## SEAT AND TANK BRACKETS.


$1320 .{ }^{\circ}$.

Nickel-Plated Pressed Steel.

| Code............... | Piliforme | Pilipede | Pilipogon | Pilaffe |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Size, inches....... | $\mathbf{4 x 5}$ | $\mathbf{5 x} \mathbf{7}$ | $\mathbf{5 x 9}$ | $\mathbf{8 \times 1 0}$ |
| Per pair........... | $\mathbf{5 0} .30$ | $.+1)$ | .70 | .85 |
| Weight per pair, lbs.. | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |



1321-C.
Nickel-Plated Brass.

| Code............... | Pillajes | Pillard | Pillarist | Pilleares |
| :--- | :---: | :---: | :---: | :---: |
| Size, inches....... | $\mathbf{4 x 5}$ | $\mathbf{5 x}$ | $\mathbf{7 x 9}$ | $\mathbf{8 x 1 0}$ |
| Per pair.......... | $\$ 1.15$ | 1.40 | 1.9 .5 | 2.40 |
| Weight per pair, lbs.. | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |

## SECTION 5.

SINKS, WASH TRAYS, SLOP HOPPERS, ETC.

## SOLID PORCELAIN,

PORCELAIN ENAMELED, PRESSED STEEL,<br>\[ \begin{aligned} \& PLAIN CAST IRON<br>\& AND SUNDRIES. \end{aligned} \]



Holbrook, Merrill \& Stetson,

## SINKS, WASH TRAYS, SLOP HOPPERS, ETC.

We are prepared to furnish these fixtures, with any extras pertaining to same, either in Solid Porcelain, Porcelain Enameled Iron, Painted Iron, Enameled Steel or Painted Steel.

Also any of the various styles of Grease Traps, Cesspools, etc., shown in the following section.

In ordering goods from this section by telegraph, it is only necessary to use the code word over or opposite the number or size of the article or fixture wanted, preceded by words from code in front of the book.

Example: Crofter six Pisenor with Piticos.
Translation: Ship by first steamer six enameled flat rim sinks, twenty by thirty, with shallow pattern backs.

## SOLID PORCELAIN ROLL RIM KITCHEN SINKS.


1400.C.

Solid Porcelain Roll Rim Kitchen Sink, Glazed Pure White, with Solid Porcelain Back and Legs, with Iron Braces to Wall; Nickel-Plated Fuller Bibbs; Nickel-Plated Plug with Open Strainer.

| Code | Pinacling | Pinnacolo | Pinnately | Pinnholz | Pinnigene |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size outside, inches | $17 \times 24$ | 20x30 | $23 \times 36$ | $2+x 42$ | $24 \times 48$ |
| Depth inside, inches. | 6 | 7 | 1 | , | 7 |
| Height of back, inches | 15 | 15 | 15 | 18 | 18 |
| Complete as described | \$34.50 | 42.00 | 47.00 | 56.00 | 65.00 |
| Shipping weight, lbs. | 200 | 275 | 365 | 375 | 425 |
| Without Porcelain Back | \$5.50 | 7.00 | 8.00 | 10.00 | 12.00 |

Without Porcelain Legs and Wall Braces, deduct $\$ 12.00$. Without Fuller Bibbs and Flanges, deduct $\$ 2.50$.

For prices on Brass and Iron Legs and Plugs see page 374 .

## SOLID PORCELAIN KITCHEN SINKS.


$1402 . \mathrm{C}$.

Can be set up with Marble or Porcelain Back or set into Tile. Sink can be supported by Brackets or Legs, according to requirements.

| Code. | Pinoplile | Pinoraban | Pinques | Pinsard | Pinsbek |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size outside, inches | 17x24 | 20x30 | $23 \times 36$ | 24x42 | $24 \times 48$ |
| Depth, inches.. | 6 | 7 |  | 7 | 7 |
| Each. | \$12.00 | 18.00 | 22.00 | 29.00 | 36.00 |
| Shipping weight, lbs. | 115 | 175 | 235 | 340 | 390 |

Add to the above list for the following.

| Cod | Pinscher | Pinisse | Pinson | Pintado | ta |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Solid Porcelain Back. | \$5.50 | 7.00 | 8.00 | 10.00 | 12.00 |
| Solid Porcelain Legs, complete with Iron Braces to Wall.............................Per pair, $\$ 12.00$ |  |  |  |  |  |
| Cast Brass Nickel-Plated Legs, complete with Braces to Wall....................... " 10.00 |  |  |  |  |  |
| Galvanized Iron Legs, complete with Braces to Wall..................................... " 5.00 |  |  |  |  |  |
|  |  |  |  |  |  |
| Bronzed Iron Legs, complete with Braces to Wall....... ........... Nickel-Plated Brass Plug and Coupling with Rubber Stopper..... |  |  |  |  | 4.50 |
|  |  |  |  | Each, | 2.50 |
| Nickel-Plated Brass Plug and Coupling with Rubber Stopper.. <br> Nickel-Plated Brass Plug and Coupling with Strainer.............. |  |  |  |  | 2.50 |

## SOLID PORCELAIN PANTRY SINKS.



## 1404-C.

Solid Porcelain Roll Rim Pantry Sink, with Double Drain Shelves and Back. Glazed Pure White; Nickel-Plated Fuller Bibbs; Nickel-Plated Plug and Coupling with Rubber Stopper; NickelPlated Legs and Wall Braces.
Code Pintoja
Length over all, inches ..... 48
Depth, inches ..... 6
Width over all, inches. ..... 18
Length of drain shelves, each, inches ..... 13
Complete as described ..... $\$ 65.80$
Shipping weight, lbs ..... 325
Code ..... Pintorio
Sink with back, legs and plug only ..... \$63.30

Without Porcelain Back, deduct $\$ 12.00$; without Nickel-Plated Legs and Braces, deduct $\$ 10.00$.
For prices on Porcelain and Iron Legs and Plugs, see page 374 .
The Sink and Drain Shelves are made and fired in one piece and are glazed pure white inside and out. The Rim is rolled front and two ends, with flat back, so that it may be set up with Marble or Porcelain back, or set into Tiles. Can be set on either Legs or Brackets according to requirements.

## "LINCOLN" ROLL RIM KITCHEN SINKS.

IMPERISHABLE, SEAMLESS, CLEAN, NON-ABSORBENT AND MORE DURABLE THAN IRON.

These Sinks are carefully made of selected clays and glazed in light yellow.


1406-C.
Lincoln Roll Rim Kitchen Sink, with Bronzed Iron Legs, Wall Braces and Plug and Coupling with Nickel-Plated Strainer.


Bronzed Iron Legs and Wall Braces, per pair, $\$ 3.00$. Plug and Coupling with Nickel-Plated Strainer, each, $\$ 2.00$

This Sink can be set into a Tile Wall or a Marble Back can be used.

In Orders and Specifications give Plate Numbers and Stock Numbers.

## PORCELAIN ENAMELED SINKS.


1408.C.

Porcelain Enameled Inside, Roll Rim Sink and Back, all in one piece, supported on Concealed Wall Hanger ( similar to Hanger illustrated on page 363); Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code........ | Pioches | Piocheur | Piochons | Piogada | Pioggetta |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 16x24 | 18x30 | $20 \times 30$ | $20 \times 36$ | 20x40 |
| Depth, inches. | 6 | 6 | 6 | ${ }^{6}$ | ${ }^{20 \times 40}$ |
| Height of back, inches. | 15 | 15 | 15 | 15 | 15 |
| Complete as described. | \$11.25 | 13.25 | 14.00 | 15.25 | 16.50 |
| Shipping weight, lbs.. Shipping measurement, cubic feet. | $\begin{aligned} & 125 \\ & 6^{2 / 2} \end{aligned}$ | $\begin{gathered} 145 \\ 8 \end{gathered}$ | 155 | $170$ | 215 |

If without Nickel-Plated Fuller Bibbs, deduct per pair, $\$ 2.50$.
If with Galvanized Air Chambers, add per pair, $\$ 2.00$.
If with $11 / 2$ Nickel-Plated Sink Trap 1240-C, and Sink Connection 1261-C, add $\$ 5.75$.
If with 2 Nickel-Plated Sink Trap 1240-C, and Sink Connection 1261-C, add $\$ 7.25$.
One in a case.

## PORCELAIN ENAMELED SINKS.


$\dagger$ 1410-C.

Porcelain Enameled Inside Roll Rim Sink and 15-inch Porcelain Enameled Back, with Brackets; Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code.. | Piomesi | Piometra | Pionagem | Pionahut | Pionias | Pionnage |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 16x24 | 18x30 | 20x30 | 18x36 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 |
| Complete as described................ | \$11.25 | 13.25 | 14.00 | 14.50 | 15.25 | 16.50 |
| Shipping weight, lbs... | 120 | 140 | 150 | 170 | 177 | 210 |
| Shipping measurement, cubic feet.. | 6 | $73 / 4$ | 81/4 | $91 / 2$ | $93 / 4$ | 101/4 |
| If with 12-inch back, deduct......... | \$0.50 | . 75 | . 75 | . 75 | . 75 | . 75 |

If without Nickel-Plated Fuller Bibbs, deduct, \$2.50
If with Galvanized Concealed Air Chambers, add $\$ 2.00$.
If with $11 / 2$-inch Nickel-Plated Sink Trap 1240-C and Sink Connection 1261-C, add $\$ 5.75$.
If with 2-inch Nickel-Plated Sink Trap 1240-C and Sink Connection 1261-C, add \$7.25.
One in a case.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.


$\dagger$ 1412-C.

Porcelain Enameled Inside Roll Rim Sink and 15-inch Porcelain Enameled Back, Interchangeable Drain Board ( 18 inches long), with Porcelain Enameled End, $1444-C$; Sink and Drain Board Brackets; Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code. | Piophila | Pioppo | Piously | Piovendo |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | 18×30 | 20x30 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 |
| Complete as described. | \$16.75 | 17.75 | 18.00 | 20.25 |
| Shipping weight, lbs | 165 | 175 | 190 | 235 |
| Shipping measurement, cubic feet | $81 / 4$ | 83 | $101 / 2$ | 11 |
| If with Back 12 inches high, deduct. | \$0.75 | . 75 | . 75 | . 75 |
| If with Drain Board 24 inches long, add. | . 50 | . 50 | . 50 | . 50 |

If without Fuller Bibbs, deduct per pair $\$ 2.50$.
If with Galvanized Concealed Air Chambers, add per pair $\$ 2.00$.
One in a case.

[^19]
## PORCELAIN ENAMELED SINKS.



Porcelain Enameled Inside Roll Rim Sink and 15 -inch Porcelain Enameled Back and Left Hand End Piece, with one Bracket; Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code. | Piovesse | Piovitura | Piovosita |
| :---: | :---: | :---: | :---: |
| Size, inches | $18 \times 30$ | 20x30 | 20x36 |
| Depth, inches | 6 | 6 | 6 |
| Complete as described. | \$14.75 | 15.75 | 17.00 |
| Shipping weight, lbs... | 170 8 | 175 | 205 $9 / 6$ |

If without Nickel-Plated Fuller Bibbs, deduct per pair, $\$ 2.50$.
If with Concealed Galvanized Air Chambers, add per pair, $\$ 2.00$.
One in a case.

+ Carried in San Francisco only.


## PORCELAIN ENAMELED SINKS.



Porcelain Enameled Inside Roll Rim Sink and 15-inch Porcelain Enameled Back and RightHand End Piece, with one Bracket, Nickel-Flated Strainer, Nickel-Plated Fuller Bibbs and Flanges.

| Code | Pipabunt | Pipage | Piparote |
| :---: | :---: | :---: | :---: |
| Size, inches. | 18x30 | 20x30 | 20x36 |
| Depth, inches | 6 | 6 | 6 |
| Complete as described. | \$14.75 | 15.75 | 17.0 ? |
| Shipping weight, lbs. | 170 | 175 | 205 |
|  | 8 | 82/3 | 91/6 |

If without Nickel-Plated Fuller Bibbs deduct, per pair, $\$ 2.50$
If with Concealed Galvanized Air Chambers add, per pair, $\$ 2.00$.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.



Porcelain Enameled Inside, Roll Rim Sink and 15-inch Porcelain Enameled Back over Sink and Drain Board; Right Hand Ash Drain Board ( 24 inches long) with Sink and Drain Board Brackets; Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code | Pipaste | Pipeau | Piperato | Pipewort | Pipiort |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 18x 30 | 18x36 | 20x30 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 |
| Length over all, inches | 54 | 60 | 54 | 60 | 64 |
| Complete as described. | \$20.40 | 21.65 | 21.35 | 22.60 | 23.85 |
| Shipping weight, lbs. | 240 | 260 | 245 | 270 | 282 |
| Shipping measurement, cubic feet. | 13 | $131 / 3$ | 141/6 | $151 / 4$ | $16^{1 / 2}$ |

If without Nickel-Plated Fuller Bibbs, deduct per pair, $\$ 2.50$.
If with Concealed Galvanized Air Chambers, add per pair, $\$ 2.00$.
Furnished with Nickel-Plated or Iron Traps when so ordered.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.



Porcelain Enameled Inside Roll Rim Sink and 15-inch Porcelain Enameled Back Orer Sink and Drain Board; Left Hand Ash Drain Board ( 24 inches long) with Sink and Drain Board Brackets; Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code | Piphano | Pipheus | Pipilabo | Pipilavit | Pipimust |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 18x30 | 18x36 | 20x30 | $20 \times 36$ | 20x+0 |
| Depth, inches | 6 | 6 | 6 | 6 | 6 |
| Length over all, inches | 54 | 60 | 54 | 60 | 64 |
| Complete as described. | \$20.40 | 21.65 | 21.35 | 22.60 | 23.85 |
| Shipping weight, lbs.. | 240 | 260 | 245 | 270 | 282 |
| Shipping measurement, cubic feet. | 13 | $131 / 3$ | 141/6 | $15^{1 /}$ | $161 / 2$ |

If without Nickel-Plated Fuller Bibbs, deduct per pair, $\$ 2.50$.
If with Concealed Galvanized Air Chambers, add per pair, $\$ 2.00$.
Furnished with Nickel-Plated or Iron Traps when so ordered.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.


$\dagger 1422-\mathrm{C}$.

Porcelain Enameled Inside Roll Rim Sink, and 15-inch Porcelain Enameled Back over Sink and Drain Boards with Union Strips; Right and Left Ash Drain Boards (18 inches long) with Sink Legs and Drain Board Brackets; Nickel-Plated Strainer; Nickel-Plated Fuller Bibbs and Flanges.

| Code. | Pipinnis | Pipistrel | Pipizon | Pipjeau |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | $18 \times 30$ | 20x30 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 |
| Length over all, inche | 66 | 66 | 72 | 76 |
| Complete as described | \$24.55 | 25.70 | 26.95 | 28.20 |
| Shipping weight, lbs | 260 | 265 | 285 | ..... |
| Shipping measurement | $101 / 2$ | 115/ı 2 | 12 | .... |

If without Nickel-Plated Fuller Bibbs deduct, per pair, $\$ 2.50$. If with Concealed Galvanized Air Chambers add, per pair, $\$ 2.00$ Brass Nickel-Plated or Iron Traps can be furnished for these Sinks.

[^20]
## PORCELAIN ENAMELED SINKS.


$\dagger$ 1424.C.

Porcelain Enameled Exterior Sink with Apron all around; Enameled Sink Legs and Wall Support; 30-inch Right Hand "Perfection" Ash Drain Board, Hinged at End to Wall and 30-inch Left Hand "Perfection" Ash Drain Board with Nickel-Plated Telescope Support; Nickel-Plated Strainer; NickelPlated Fuller Bibbs and Flanges.
Code. Pipkins
Size, inches ..... $24 \times 42$
Width of Apron, inches ..... 7
Complete as described ..... $\$ 54.50$
Shipping weight, lbs ..... 295

If without Nickel-Plated Fuller Bibbs, deduct per pair, $\$ 2.50$.
If without "Perfection" Ash Drain Boards, deduct, $\$ 22.00$.
Nickel-Plated or Iron Traps can be furnished for this Sink.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.


†1426-C. as shown. 1428-C. for Left End.

Cut shows fixture with Right End Piece.
When furnished with Left End Piece sink is on the opposite side of Wash Tray from that shown in cut.
Porcelain Enameled Inside Roll Rim Sink and Wash Tray Combination, and 15 -inch Porcelain Enameled Back over Sink and Tray, with Union Strip, Porcelain Enameled End Piece and Fainted Wash Tray Pedestal, Nickel-Plated Wash Tray Plug and Coupling with Rubber Stopper, and Soap Dish; Nickel-Plated Sink Strainer; Nickel-Plated Fuller Sink and Vash Tray Bibbs with Flanges.

| Code for Right End | Pipuncle | Piquades |
| :---: | :---: | :---: |
| Code for Left End. | Piquancy | Piqueron |
| Size of sink, inches. | 20x30 | 20x36 |
| Depth of sink, inches. | 6 | 6 |
| Complete as described | \$44.75 | 46.00 |
| Shipping weight, lb | 405 | 425 |

If with Nickel-Plated Vented " $S$ " Traps under Sink and Wash Tray, add each $\$ 5.75$.
If without Fuller Sink and Wash Tray Bibbs, deduct for all, $\$ 5.00$.
If with Concealed Galvanized Air Chambers on Sink, add per pair, $\$ 2.00$.
In ordering, always state whether wanted with Right or Left End Piece.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.


$\dagger$ 1429-C.
Cut shows fixture with Sink on Left Side of Wash Tray.
Porcelain Enameled Inside Roll Rim Sink and Wash Tray Combination, and 15-inch Porcelain Enameled Back Over Sink and Tray with Union Strip; Painted Wash Tray Pedestal and Sink Leg; Nickel-Plated Wash Tray Plug and Coupling with Rubber Stopper and Soap Dish; Nickel-Plated Sink Strainer; Nickel-Plated Fuller Sink and Wash Tray Bibbs with Flanges; Nickel-Plated Vented "S" Traps on Sink and Tray.
Code for Left Hand. PiquesusPiquette20x306Depth of sink, inches
$\$ 54.75$ ..... 56.00
Complete as described405

If without Sink or Tray Trap, deduct each, $\$ 5.75$.
If without Fuller Sink and Wash Tray Bibbs, deduct for all, \$5.00.
If with Concealed Galvanized Air Chambers, add per pair, $\$ 2.00$.
In ordering always state whether wanted with Sink on Right or Left side of Wash Tray.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SINKS.



1430-C.

Porcelain Enameled Flat Rim Sink with 15 -inch Deep Pattern Porcelain Enameled Back, Painted Brackets, Nickel-Plated Strainer and Nickel-Plated Fuller Bibbs with Flanges.

| Cod | Pirabebe | cant | Piragone | Piraguas | Piramena | Piratage | Pirathon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inche | $\dagger 16 x 24$ | $\dagger 18 \times 24$ | $18 \times 30$ | 18x36 | 20x30 | 20x36 | $\dagger$ 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Complete as described.. | \$9.25 | 9.50 | 11.00 | 13.00 | 11.00 | 12.50 | 14.25 |
| Shipping weight, lbs. | 100 | 109 | 116 | 132 | 123 | 135 | 161 |
| If with Back 12 inches high, deduct... <br> If with Shallow Pattern Backs, deduct | $\$ 0.50$ .80 | .50 .80 | .75 .95 | .75 1.10 | . 75 | .75 1.10 | .75 1.20 |

If with Concealed Galvanized Air Chambers, add per pair, $\$ 2.00$.
If without Nickel-Plated Fuller Bibbs, deduct per pair, $\$ 2.50$.

[^21]
## PORCELAIN ENAMELED SINKS.



1432-C.

Porcelain Enameled Flat Rim Sink with 12-inch Shallow Pattern Back and Right Hand End Piece; Painted Bracket; Nickel-Plated Strainer and Nickel-Plated Fuller Bibbs with Flanges.


If without Nickel-Plated Fuller Bibbs, deduct per pair $\$ 2.50$.
Concealed Air Chambers cannot be used with above sink backs.
When ordering specify whether wanted with Right or Left End Piece.
Brass or Iron Sink Traps can be furnished for these sinks.

[^22]
## FACTORY WASH SINKS.



1434-C.

Extra Heavy Painted Iron Factory Wash Sink on Standards; fitted with $3 / 4$-inch Galvanized Supply Pipe and Painted Supports over center of Sink; $1 / 2$-inch Compression Bibbs; Soap Cups with Perforated Bottoms; Standing Overflow, and 2 -inch Painted Cast Iron S Trap with Brass Trap Screw.

| Code | Pisaban | Pisadella | Pisadura | Pisaflore | andros | m |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 24x60 | $2+572$ | 24x84 | $24 \times 96$ | $24 \times 108$ | $24 \times 120$ |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 |
| Sink, less Bibbs and Stop | \$25.75 | 29.00 | 33.25 | 35.50 | 38.00 | 41.00 |
| Shipping weight, lbs. | 17.) | 200 | 275 | 325 | 340 | 3.50 |

Add for Finished Compression Bibbs, each, $\$ 1.00$.
Add for Rough Brass Stop and Supply Pipe from floor to Sink, $\$ 1.50$.
Trap can be furnished with Hub Vent at same price, if desired.
Above Sink can be furnished to set against the wall with Supply Pipes and Supports over back edge of Sink. Prices upon application.

## PORCELAIN ENAMELED SINKS.


1436.C.

Porcelain Enameled Regular Flat Rim Kitchen Sinks with Nickel-Plated Strainers, Bolts, Nuts and Couplings.

These Sinks are made with Porcelain Enameled Rims and Rounded Corners.
For Sizes and Prices see Page 392.
In Orders and Specifications give Plate Numbers and Sizes.

## PORCELAIN ENAMELED SINKS.

Illustrated and described on page 391.

| Code. | Piscantine | Piscarium | Piscary | Piscation |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | $\dagger 14 \times 20$ | $\dagger 16 \times 20$ | 16x24 | †17x28 |
| Each. | \$3.00 | 3.15 | 3.25 | 3.75 |
| Shipping weight each, lbs | 38 | 37 | 49 | $541 / 2$ |
| Code. | Piscatrice | Piscemur | Piscolabis | Pisculento |
| Each. | 18x24 | $18 \times 30$ 4.25 | †18x32 4.65 | $18 \times 36$ 4.75 |
| Shipping weight each, lb | 49 | 56 | 66 | 67 |
| Code | Pisellone | Pisenor | Pisidicus | Pisinnum |
| Size, inche | $\dagger 20 \times 24$ | 20x30 | 20x36 | $\dagger 22 \times 36$ |
| Each.. | \$3.75 | 4.50 | 5.25 | 5.50 |
| Shipping weight each, lb | 54 | 63 | 70 | 80 |
| Code. | Pisnets | Pisolitic | Pispannes | Pispiglio |
| Size, inch | 20x40 | 22x42 | 24x48 | $\dagger 24 \times 50$ |
| Each.. | \$5.75 | 6.25 | 7.75 | 9.00 |
| Shipping weight each, lbs | 86 | 105 | 127 | 147 |
| If with Nickel-Plated P | topper ( | 9-C), ad | ach, \$0.35 |  |

## GALVANIZED SINKS.

Same as shown and described on page 391 but Galvanized instead of Enameled.

| Code | Pispola | Pissando |
| :---: | :---: | :---: |
| Size, inches... | $24 \times 50$ | $24 \times 60$ |
| Depth, inches. | 6 | 6 |
| Each. | \$9.00 | 30.00 |
|  | 145 |  |

## PORCELAIN ENAMELED SINKS.


$\dagger$ 1438-C.
Porcelain Enameled Regular Flat Rim Kitchen Sink, with Overflow, Nickel-Plated Strainer and Rubber Stopper.

| Code. | Pissequi | Pissodes | Pissophan | Pistabunt |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | 14x20 | 16x24 | $18 \times 30$ | 20x30 |
| Each, as described. | \$5.00 | 5.25 | 6.25 | 6.50 |
| Shipping weight, lbs. | 34 | 50 | 57 | 65 |
| + Carried in San Fran |  |  |  |  |

## PORCELAIN ENAMELED SINKS.


$\dagger$ 1440.C.
PORCELAIN ENAMELED HALF-CIRCLE SINK, WITH NICKEL-PLATED STRAINER.

| Code | Pistache | Pistagnon | Pistavit | Pistazite |
| :---: | :---: | :---: | :---: | :---: |
| Numbers. | 1 | 2 | . | 6 |
| Size, inches | 14 x 24 x 6 | $14 \times 27 \mathrm{x} 6$ | $16 \times 29 \mathrm{x} 6$ | 17x31x6 |
| Each. | \$3.45 | 4.00 | 4.55 | 5.15 |
| Shipping we | 26 | 28 | 32 | 33 |

If with Plug Strainer and Rubber Stopper add, each, $\$ 0.35$.

$\dagger 1442 . \mathrm{C}$.
PORCELAIN ENAMELED CORNER SINK, WITH NICKEL-PLATED STRAINER.


Pistill
5 22 x 31 x 6
5.60

34
$\dagger$ Carried in San Francisco only.

## SINK DRAIN BOARDS.


$\dagger$ 1444-C.

† 1444-C. Bottom View.

Interchangeable Hardwood Drain Board, with Porcelain Enameled End for attaching to Roll Rim Sink.

At the Sink End of the Board is an Enameled Iron Attaching Piece, made to fit over the Roll Rim, and can be used on any Full Roll Rim Sink.


## $1446 \cdot \mathrm{C}$.

Porcelain Enameled Interchangeable Drain Board. Can be used with any Kitchen Sink.

| $\dagger 18$ INCHES LONG. |  |  | 24 INCHES LONG. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code............................. | Pistriger | Pistrilla | Code. | Pistrino | Pistrix |
| Width, inches.................. | 18 | 20 | Width, inches................... | 18 | 20 |
| Each.............................. | \$3.25 | 3.50 | Each. | \$3.75 | 4.00 |
| Weight each, lbs.. | 50 | 54 | Weight each, lbs.. | 57 | 60 |

$\dagger$ Carried in San Francisco only.

## DRAIN BOARD MATS.



1448 C.
Perforated Rubber Mat for Porcelain Enameled Drain Boards.

18 INCHES LONG 24 INCHES LONG.

| Code............... Pisuram | Pisuros | Code............... Pitanca Pitapat |  |
| :--- | :--- | :--- | :--- |
| For Drains in width, in. | $\mathbf{1 8}$ | $\mathbf{2 0}$ | For Drains in width, in. $\mathbf{1 8}$ |
| P0 | $\mathbf{2 0}$ |  |  |
| Each................. $\$ 2.25$ | 2.50 | Each.............. $\$ 2.75$ | 3.00 |

## AIR CHAMBERS FOR SINK BACKS.


1449.C.

Concealed Galvanized Air Chamber for Deep Pattern Sink Backs.
Code. Pitarche
Each.
$\$ 1.00$
Weight each, lbs........... 10

## HARDWOOD MATS OR GRATINGS FOR ENAMELED SINKS.


1450.C.

Hardwood Mat for Flat or Roll Rim Sinks.

| Code. | Pitcoal | Piteous | Pitezna | Pitfall | Pithenor | Pithily |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For Sinks, inches | 16x24 | 18x30 | 18x86 | $20 \times 30$ | 20x36 | 20x40 |
| Each. | \$1.50 | 2.25 | 3.00 | 2.25 | 3.00 | 3.50 |
| Weight each, lbs | 5 | 7 | 8 | 7 | 8 | 9 |

When ordering state width and length and style of Sink to be used with.
In Orders and Specifications give Plate Numbers and Sizes.

## PORCELAIN ENAMELED SINK BACKS.



## 1452-C.

Porcelain Enameled Roll Rim Shallow Pattern Sink Back. 12 inches high. Concealed Air Chambers cannot be used with this Back. Can be used only on regular Flat Rim Sinks.

| Code Length, inches | Pithom 24 | $\begin{gathered} \text { Piticos } \\ \mathbf{3 0} \end{gathered}$ | Pitipie 36 | $\begin{aligned} & \text { Pitman } \\ & \mathbf{4 0} \end{aligned}$ | Pitocchio 48 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$2.20 | 2.80 | 3.40 | 3.80 | 5.00 |
| Weight each, lbs | 30 | 37 | 46 | 55 | 75 |

1454.C.

Porcelain Enameled Roll Rim Deep Pattern Sink Back. Can be used with regular Flat Rim or Roll Rim Sinks, and with or without Air Chambers.

15 INCHES HIGH. 12 INCHES HIGH.

| Le | $\begin{aligned} & \text { Pitonil } \\ & \mathbf{2 4} \end{aligned}$ | Pitonisa 30 | Pitrion 36 | $\begin{aligned} & \text { Pittacal } \\ & \mathbf{4 0} \end{aligned}$ | Code. Length, inches... | $\begin{aligned} & \text { Pittakos } \\ & \mathbf{2 4} \end{aligned}$ | Pittance 30 | Pittheis Pittizite $36 \div 40$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$3.00 | 3.75 | 4.50 | 5.00 | Each | \$2.50 | 3.00 | 3.75 \| 4.25 |
| Veight each, lb | 45 | 50 | 55 | 65 | Weight each, | 40 | 45 | 50 ]- 60 |

## PORCELAIN ENAMELED SINK BACKS.


$1456 . \mathrm{C}$.
Porcelain Enameled Deep Pattern End Piece for Flat Rim and Roll Rim Sinks, 15 inches High.
Code, Right Hand... Piugas Piulco Puma Piumone Code, Left Hand..... Pivanes Pivert Pivoin Pivotted Length, inches........ $\dagger 16 \quad 18 \quad 20 \quad \dagger 22$ Each ................. \$1.75 $2.00 \quad 2.25 \quad 2.50$
Weight each, lbs.

In ordering always state whether Right or Left Hand End is wanted.

## CAMPBELL SINK BRACKETS.


1460.C.


1460 - .

Adjustable Cast Iron Sink Brackets for Flat or Roll Rim Sinks. For Sinks from 14 to 20 inches wide.



1462-C.

## HAMMOND DESICN SINK BRACKET.

FOR ROLL RIM SINKS.
Iron Porcelain Enameled. 1464-C.

| Code........ | Placacept | Placacers | Placacetal | Placadade |
| :--- | :---: | :---: | :---: | :---: |
| Size, inches | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 2}$ |
| Per pair..... | $\$ 1.50$ | 2.00 | 2.50 | 3.00 |

Brass, Nickel-Plated. $1464-\mathrm{C}$.

| Code $\ldots .$. | Placadent | Placadist | Placadole | Placadust |
| :--- | :---: | :---: | :---: | :---: |
| Size, inches | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 2}$ |
| Per pair..... | $\$ 6.00$ | 8.00 | 10.00 | 12.00 |


$\dagger$ 1464-C.

## FITTINGS FOR CAST IRON SINKS.



## SHORT BRASS SINK BOLTS, WITH NICKEL-PLATED HEAD AND ONE IRON NUT.

Code............................................................................... Placafull
Per dozen
Weight per dozen, lbs. 1/2

## 1466. 1.

LONG BRASS SINK BOLTS WITH TWO IRON NUTS.

Code
Per dozen ........................... Placagast

Weight per dozen, lbs.
$\dagger$ Carried in San Francisco only.

## LONG IRON SINK BOLTS, WITH TWO IRON NUTS.

Code. Placaloon
Per dozen......................................... \$0.50
Weight per dozen, lbs....................... 1

## FITTINGS FOR CAST IRON SINKS.



Nickel-Plated Duffy Sink Strainer. 1472-C.

| Code | Placeaba | Placeamos |
| :---: | :---: | :---: |
| Size, inches................................ | $41 / 2$ | 45/8 |
| Center to center of holes, inches...... | 35\% | $33 / 4$ |
| Each. | \$0.75 | . 80 |
| W'eight each, lbs.. | 5/26 | 6/16 |



1468-C.
Open Sink Strainer. Nickel-Plated Brass.

| Code...................................... ...... | Placarlo |
| :---: | :---: |
| Per dozen | \$4.00 |
| Weight per dozen, lbs. | 2 |



If furnished with Bolts and Nuts as shown, add per dozen, $\$ 0.50$.


1470-C.
Painted Iron Sink Coupling for Lead Pipe Connection.
Code Placatrix
Per dozen. $\qquad$$\$ 1.25$
Weight per dozen, lbs
8


1471-(.
Painted Iron Sink Coupling for Iron Pipe Connection.

| Code.................. | Placatune | Placavel | Placaront |
| :--- | :---: | :---: | :---: |
| Size pipe, inches.... | $\mathbf{1}^{1 / 4}$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| Each................. | $\$ 0.60$ | .60 | .60 |
| Weight each, lbs.... | 1 | 1 | 1 |

## COLUMBUS WROUGHT STEEL KITCHEN SINKS.

## FLAT EDGE. IMPROVED BRASS COUPLINGS WITH REMOVABLE STRAINERS.

Couplings made for connection with $11 / 2$-inch Standard Iron Pipe or Lead Pipe.

$\dagger$ 1480. C.

| PAINTED. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code. | Placusa | Placystes | Pladarose | Plattebar | Plafond | Plagaban |
| Size, inches.. | 16x24 | $18 \times 30$ | 18x36 | 20x30 | 20x36 | 20x40 |
| Depth, inches.............................. | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete. | \$2.00 | 2.50 | 3.00 | 3.00 | 3.70 | 4.00 |
| Weight each, lbs........................... | 12 | 14 | 16 | 19 | 20 | 20 |
| Shipping meas. each, cu. ft............. | $11 / 3$ | 15/6 | 21/4 | 2 | 21/2 | 23/4 |


| Code. | Plagalium | Plagandus | Plagellis | Plaggon | Plagiat | Plagies |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................................. | 16x24 | 18x30 | $18 \times 36$ | 20x30 | 20x36 | 20x40 |
| Depth, inches.............................. | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete. | \$4.00 | 5.10 | 6.50 | 6.25 | 7.75 | 8.50 |
| Weight each, lbs... | 12 | $141 / 2$ | 18 | 19 | 21 | 21 |
| GRAY ENAMELED. |  |  |  |  |  |  |
| Code. | Plagiopes | Plaglusie | Plaguily | Plaice | Plaidais | Plaidera |
| Size, inches. | 16x24 | 18x30 | $18 \times 36$ | 20x30 | 20x36 | 20x 40 |
| Depth, inches | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete. | \$6.50 | 8.00 | 9.50 | 9.00 | 10.50 | 11.50 |
| Weight each, lbs.......................... | 13 | 17 | 18 | $171 / 2$ | 21 | 22 |

## WHITE ENAMELED.

| Code. | Plaideur | Plaignant | Plaignisse | Plaindron | Plaintful | Plairont |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 16x24 | $18 \times 30$ | $18 \times 36$ | 20x30 | 20x36 | 20x40 |
| Depth, inches | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete | \$7.50 | 9.50 | 11.00 | 10.50 | 12.00 | 13.00 |
| Weight each, lbs.. | 13 | 17 | 18 | $171 / 2$ | 21 | 22 |

Sinks furnished with Rubber Plugs when so ordered, but Plugs are charged extra.
$\dagger$ Carried in San Francisco only.

## "COLUMBUS" IMPROVED SINK COUPLINGS.



Sectional View Showing Method of Connecting Pipe.
The above Cut represents our New Coupling Complete Attached to Sectional View of Sink; below is the Coupling detached. "A" is a Ferrule having one end flanged to fit Sink and the other end threaded for $11 / 2-$ inch Standard Iron Pipe. " B " is a Locknut. "C" is a Standard Coupling in two parts for making lead pipe connection. " R " is a Powell's Patent Star Metal Cored Rubber Stopper or Plug, which fits Ferrule "A."

1482. C.
"A." Ferrule.
$\begin{array}{cc}\text { Code............. } & \text { Plaisote } \\ \text { Each.......... } & \$ 0.25\end{array}$


1483-C.
"B." Locknut.

$\$ 0.10$
Each
Other Parts of Columbus Sink Couplings not shown.


148t-"C'".
"C." Coupling. Code Plaito Each............. \$0.35

1485." ${ }^{6} \mathrm{C}$ ".
"R." Plug.
Code............ Plaitum Each $\$ 0.10$

Code.
Plamee...............Coupling complete with Painted Strainer.............................................Each, $\$ 0.60$
Plamoter............. " "t " Galvanized Strainer............................................................ " " 70
Planador............ " " " Enameled " ............................................. " " . 80
Planagete.......... " " " Nickel-Plated " ........................................................... " . . 85
Planarida ............Painted Strainer only.............................................................................. ". . . 10
Planasia..............Galvanized " " ................................................................................. " . . 20
Planaxes............Enameled " " ........................................................................ " ${ }^{\text {. }} 25$
Plancam ..............Nickel-Plated Strainer only.................................................................... ". . . 25
Planchado ...........Brass Screws................................ ........................................................ " . 06
Plancheur............ " " with Nickel-Plated Heads........................................................... " " . 06
Planeten..............Leather IVashers............................................................................ ". . 05
Planetoid ...... ....Rubber ". ........................................................................................... ". . . 05
Planetule ............Solder Nipple, no Nut........................................................................................... ". . . 25
Plangebat...... .....Coupling Nut only................................................................................................ ". . 10
In making connection drop Ferrule "A" through neck of Sink. Tight joint may be made with a thin roll of Putty placed under the flanged end of Ferrule A, or with a Rubber Gasket before dropping through Sink. Screw Locknut B against neck of Sink, making a Tight Joint. In connecting Iron Pipe, attachment is made direct to Ferrule "A," which has a $11 / 2$-inch Standard Iron Pipe Thread, by means of a Standard Iron Pipe Fitting. In attaching Lead Pipe, solder Pipe to Coupling B, ther screw the Coupling to Ferrule A.

This method of attachment is simple and reliable. It avoids work in cramped position. There can be no leakage. Strainer is held in position by a Brass Screw passing into cross piece on inside of Ferrule "A," and can be removed and dirt forced from pipe without disconnecting Pipe from Sink.

[^23]
## "NEW ERA" WROUGHT STEEL KITCHEN SINKS. <br> FLAT EDGE.

These Sinks are stamped with a long neck so shaped as to receive Lead Pipe which is attached in the usual manner same as on Cast Iron Sinks. Direct Iron Pipe connection is made by the use of Cast Iron Nipple A (see page 403 ).


1486-C.
PAINTED.

| Code | Plangent | Plangeris | Planherd | Planiceps | Planiglob | Planimetro |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 16x24 | 18x30 | $18 \times 36$ | 20x30 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete.. | \$2.00 | 2.50 | 3.00 | 3.00 | 3.70 | 4.00 |
| Weight each, lbs.................. Shipping meas. each, cu. ft.. .. | 9 $11 / 3$ | 13 156 | 17 $21 / 4$ | 15 2 | $\begin{gathered} 18 \\ 21 / 2 \end{gathered}$ | $\begin{gathered} 19 \\ 23 / 4 \end{gathered}$ |

GALVANIZED.

| Code | Planipedes | Planless | Plannest | Planorbes | Planorum | Planquer |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | +16x24 | 18x30 | $\dagger 18 \times 36$ | 20x30 | $\dagger 20 \times 36$ | $\dagger$ 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete | \$4.00 | 5.10 | 6.50 | 6.25 | 7.75 | 8.50 |
| Weight each, lbs | 10 | 15 | $171 / 2$ | 17 | 20 | $201 / 2$ |

BLUE ENAMELED INSIDE AND OUTSIDE.

| Cod | Plantages | Plantains | Plantard | Plantemos | Planthout | Plantillar |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 16x24 | $18 \times 30$ | 18x36 | 20x30 | 20x36 | 20x40 |
| Depth, inches...................... | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete........ ........... | \$4.80 | 6.00 | 6.75 | 6.75 | 7.50 | 9.75 |
| Weight each, lbs......... ........ | $91 / 2$ | 14 | 17 | 16 | 17 | 21 |

GRAY ENAMELED.

| Code. | Plantista | Plantlet | Plantoir | Plantules | Planudos | Planulite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches... | 16x24 | 18x30 | 18x36 | 20x30 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete. | \$6.50 | 8.00 | 9.50 | 9.00 | 10.50 | 11.50 |

WHITE ENAMELED.

| Code | Plappart | Plaque | Plaquette | Plaquer | Plaseam | Plashoot |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 16x24 | $18 \times 30$ | 18x36 | 20x30 | 20x36 | 20x40 |
| Depth, inches. | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete. | \$7.50 | 9.50 | 11.00 | 10.50 | 12.00 | 13.00 |
| Weight each, lbs. | 10 | 14 | 17 | 16 | 17 | 21 |

Plug, Strainer and Nipple for iron pipe connection supplied when ordered, but are charged extra.

+ Carried in San Francisco only.


P 403

The object of punching four holes and using two bolts to hold the clamping collar with lead pipe to the throat of sink and two separate bolts to hold the strainer independent of the collar or pipe connection is to allow of the removal of the strainer without loosening the waste pipe.

"NEW ERA" SINK BRACKETS.
Suitable for all sizes of Roll Rim "New Era" Sinks, see 149t-C.


Provided with a set screw that securely holds sink on bracket.


1493-('.
In Orders and Specifications give Plate Numbers and Names.

# "NEW ERA" ROLLED RIM WROUGHT STEEL SINKS. 



## 1494-C.

These Sinks, like the "New Era". Flat Rim Sinks, are furnished with cast iron coupling for lead pipe, and can be connected with iron pipe by use of the nipple A (see page 403). "New Era" Rolled Rim Steel Sinks are fastened to the brackets by means of the sleeve formed by the roll of the rim on the ends of the sink. The flange of the bracket fits into the sleeve. To hold the sink still more firmly in place there is a set screw on the under side of the bracket which turns up against the under side of the sink rim. By putting the Sink on the brackets in this manner a smooth surface is obtained, the rim being left free from screws such as are used on other rolled rim steel sinks. For brackets see page 403 .

PAINTED.

| Code | Platessa | Platicada | Platicame | Platicaron | Platicos | Platinage |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches............................ | 16x24 | 18x80 | 18x36 | 20x30 | 20x36 | 20x 40 |
| Depth, inches......................... | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete...................... | \$2.25 | 2.70 | 3.25 | 3.25 | 4.00 | 4.30 |
| Weight each, lbs...... | 11 | 16 | 17 | 17 | 20 | 21 |
| GALVANIZED. |  |  |  |  |  |  |
| Code | Platinic | Platinise | Platkop | Platon | Platonis | Platrant |
| Size, inches............................ | 16x24 | 18x30 | 18x36 | 20x30 | 20x36 | 20x40 |
| Depth, inches........................ | 6 | 6 | 6 | 6 | 6 | 6 |
| Each, complete...................... | \$2.70 | 3.55 | 4.30 | 430 | 5.10 | 5.90 |
| Weight each, lbs.. | 12 | 17 | 20 | 18 | 21 | 23 |

Furnished with Rubber Plugs, Plug Strainers or A Nipples when ordered, but charged extra. (See page 403.)

## STEEL SINK BACKS.

15 inches high.
PAINTED.


| PAINTED. |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code............... | Platreur | Platschig | Plattbaum | Platteuse |  |  |  |
| Width, inches....... | $\mathbf{2 4}$ | $\mathbf{3 0}$ | $\mathbf{3 6}$ | $\mathbf{4 0}$ |  |  |  |
| Each................ | $\$ 1.60$ | 1.90 | 2.20 | 2.60 |  |  |  |
| Weight each, lbs.... | 6 | 10 | 12 | $151 / 2$ |  |  |  |
|  | GALVANIZED. |  |  |  |  |  |  |
| Code................ Platfuss | Plattgarn | Platthin | Plattlack |  |  |  |  |
| Width, inches....... | $\mathbf{2 4}$ | $\mathbf{3 0}$ | $\mathbf{3 6}$ | $\mathbf{4 0}$ |  |  |  |
| Each................ $\$ 2.20$ | 2.60 | 3.00 | 3.50 |  |  |  |  |
| Weight each, lbs.... | 6 | 12 | 14 | 15 |  |  |  |

## "COLUMBUS" WROUGHT STEEL PANTRY SINKS.

WITH IMPROVED BRASS COUPLING. FOR BUTLER'S PANTRY. INDESTRUCTIBLE. ODORLESS.


1496-C.

See pages 400 and 401 for description of Columbus Sinks.

OVAL.
With Common Overflow and Plugs with Rubber Stoppers.

| Code | Platunio | Plature |
| :---: | :---: | :---: |
|  | Painted | White Enameled |
| Size, inches | $14 \times 20$ | 14-26 |
| Depth, inche | 6 | 6 |
| Each, complete. | \$2.00 | 6.50 |
| Weight each, lbs | , | 9 |
| Shipping measur | 1 | 1 |

## OBLONG. WHITE ENAMELED.

With Nickel-Plated Common Overflow and Plug with Rubber Stopper.
Code ..... Plaudit
Size, inches ..... $16 \times 24$
Depth, inches ..... 6
Each, complete ..... $\$ 9.00$
Weight each, lbs ..... 14
Shipping measurement each, cubic feet ..... $11 / 3$

# OVAL COPPER PANTRY SINKS. 



TINNED AND POLISHED INSIDE. IMPROVED PATTERN

Dishes cannot accumulate in center of Improved Pattern Oval Pantry Sinks to obstruct Waste Outlet.

| Code $\qquad$ Size, inches $\qquad$ | $\begin{aligned} & \text { Plaudunt } \\ & \mathbf{1 4 x 2 0} \end{aligned}$ | $\begin{aligned} & \text { Plausible } \\ & \mathbf{1 6 x 2 4} \end{aligned}$ | $\begin{aligned} & \text { Plausore } \\ & \text { 18x30 } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Each, as described...... | \$7.50 | 10.00 | 13.00 |
| Weight each, lbs........... | $41 / 2$ | $51 / 2$ | $71 / 2$ |

1497-C.
Oval Copper Pantry Sink with Overflow and Waste Plug with Rubber Stopper.

We can furnish Square Copper Pantry or Oval German Silver Pantry sinks in above sizes. (Prices on application.)

## SOLID PORCELAIN LAUNDRY TRAYS.



1500-1.

Solid Porcelain Roll Rim Laundry Trays, glazed pure white, with Bronzed Iron Legs; NickelPlated Waste Plugs and Couplings with Rubber Stoppers; Hardwood 1 ringer Attachments.

Dimensions of each Tray outside, $26 \times 24 \times 17$ inches.

| Code | Playada | Playazo | Playbill |
| :---: | :---: | :---: | :---: |
| Number of Trays | 1 | 2 | 3 |
| Length over all, inches | 26 | 52 | 78 |
| Complete as described. | \$.30.30 | 60.60 | 90.90 |
| Shipping weight, lbs. | 260 | 520 | 780 |
| Code. | Playbook | Playday | Playful |
| Trays only.. | \$20.00 | 40.00 | 60.00 |

Solid Porcelain Legs with Wall Supports, per pair, $\$ 9.00$
Bronzed Iron Legs with Wall Supports, per pair, $\$ 4.00$.
Galvanized Iron Standards complete, $\$ 6.00$.
Galvanized Iron Legs, per pair, \$5.00.
Iron Legs painted white, per pair, $\$ 5.00$.
Brass Nickel-Plated Legs, per pair, $\$ 10.00$.
Nickel-Plated Plugs and Couplings, each, $\$ 1.30$.
Hardwood Wringer Attachment, Brass Bound, each, \$5.00.

## "LINCOLN" LAUNDRY TRAYS.

SEAMLESS, CLEAN, NON-ABSORBENT AND MORE DURABLE THAN IRON.

These Trays are carefully made of selected Clays and glazed in Light Yellow.


1502-C.

Lincoln Roll Rim Laundry Trays with Bronzed Iron Legs and Supports to Wall with Connecting Bar; Nickel-Plated Waste Plugs and Couplings with Rubber Stoppers; Ash Wringer Attachment.

Dimensions of each tray outside, $31 \times 25 \times 17$.

| Code. | Playones | Playsome | Playtime |
| :---: | :---: | :---: | :---: |
| Number of trays. | 1 | 2 | 3 |
| Length over all, inches | 31 | 62 | 93 |
| Complete as described. | \$18.25 | 33.15 | 50.05 |
| Code. | Plazoleta | Plazuelas | Pleadest |
| Trays only... | \$12.50 | 25.00 | 37.50 |
| Shipping weight, lbs. | 317 | 634 | 951 |

Bronzed Iron Legs complete, each, \$2.00.
Nickel-Plated Plugs and Couplings, each, \$1.25.
Ash Wringer Attachment, each, $\$ 0.65$.
Bar between Legs for one Tray, each, $\$ 0.50$.
Bar between Legs for two Trays, each, $\$ 1.00$.
Bars between Legs for three Trays, $\$ 1.50$.
These Trays can be furnished with cock holes if so desired.

## "PLACER" LAUNDRY TRAYS.

SEAMLESS, CLEAN, NON-ABSORBENT AND MORE DURABLE THAN IRON.

These Trays are carefully made of selected Clays and glazed in Light Yellow.


1504-C.
"Placer" Flat Rim Laundry Trays with Painted Iron Legs and Supports to Wall; Polished Brass Waste Plug and Coupling with Rubber Stopper; Pine Wringer Attachment.

Dimensions of each Tray outside, $25 \times 221 / 2 \times 15$ inches.

| Code. | Pleamar | Plebaglia | Plebamu |
| :---: | :---: | :---: | :---: |
| Number of Trays | 1 | 2 | 3 |
| Length over all, inches | 25 | 50 | 75 |
| Complete as described. | \$9.80 | 18.00 | 27.20 |
| Code.. | Plebano | Plebeity | Plebeizza |
| Trays only.. | \$6.50 | 13.00 | 19.50 |
| Shipping weights, lbs. | 200 | 400 | 600 |

Painted Iron Legs with Wall Supports, each, \$1.00.
Polished Brass Plug and Couplings, each, $\$ 1.00$.
Pine Wringer Attachment, each, $\$ 0.40$.
Bar between Legs for one Tray, each, $\$ 0.30$.
Bars between Legs for two Trays, each, $\$ 0.60$.
Bars between Legs for three Trays, $\$ 0.90$.

These Trays can be furnished with cock holes if so desired.

## PORCELAIN ENAMELED LAUNDRY TRAYS.



1506-C.

Porcelain Enameled Roll Rim Laundry Trays and 12-inch Porcelain Enameled Backs, Nickel Plated Union Strips and Hardwood Wringer Attachments, Painted Pedestals; Nickel Plated Soap Dishes; Nickel Plated Waste Plugs and Couplings, with Rubber Stoppers; Nickel Plated Fuller Wash Tray Bibbs and Flanges.

| Code <br> Number of Trays | Plebicole 1 | Plebiscite 2 | Plechtig 3 |
| :---: | :---: | :---: | :---: |
| Complete as described | \$25.50 | 47.00 | 70.50 |
| Shipping weight, pounds. | 233 | 465 | 700 |
| Code | Plectane | Plectibile | Plectique |
| Trays with Backs, Soap Dishes, Union Strips, Plugs and Pedestals, only | \$23.00 | 42.00 | 63.00 |

Nickel Plated Fuller Wash Tray Bibbs and Flanges, per pair, $\$ 2.50$.
Wringer not included in above prices.

## Dimensions :

Front to back (inside), $213 / 4$ inches; (outside), 27 inches; Length inside, 23 inches; Length over all (set of three trays), 83 inches; depth inside, $14^{1 / 4}$ inches; height from floor to top of rim, $311 / 2$ inches.

## PORCELAIN ENAMELED LAUNDRY TRAYS.



1508-C.

Porcelain Enameled Roll Rim Laundry Trays, with Nickel Plated Union Strips and Hardwood Wringer Attachments; Painted Pedestals; Nickel Plated Soap Dishes; Nickel Plated Waste Plugs and Couplings, with Rubber Stoppers; Nickel Plated Fuller Wash Tray Bibbs and Flanges.

| Code......... Number of | Pledgeor $1$ | Pledgery $2$ | Pledgaba <br> 3 |
| :---: | :---: | :---: | :---: |
| Complete as described. | \$22.50 | 41.00 | 61.50 |
| Shipping weight, pounds | 200 | 400 | 600 |
| Code. | Plegadizo | Pleguete | Pleister |
| Trays with Soap Dishes, Wringer Attachments, Union Strips, Plugs and Pedestals, only | \$20.00 | 36.00 | 54.00 |
| Nickel Plated Fuller Wash Tray Bibbs and Flanges, per pair, $\$ 2.50$. Wringer not included in above prices. |  |  |  |

## Dimensions:

Front to back (inside), $213 / 4$ inches; (outside), 27 inches; length inside, 23 inches; length of three trays over all, 83 inches; depth inside, $141 / 4$ inches; height from floor to top of rim, $311 / 2$ inches.

## PORCELAIN ENAMELED WASH TRAYS.



## 1510-C.

Porcelain Enameled "Duplex" (Two Part) Flat Rim Wash Trays, cast in one piece, with 12inch Porcelain Enameled Back and Nickel Plated Union Strips; Painted Iron Standards; Nickel Plated Soap Dishes; Nickel Plated Waste Plugs and Couplings with Rubber Stoppers; Nickel Plated Fuller Wash Tray Bibbs and Flanges.
Code ..... Pleitdag
Complete as described. ..... $\$ 36.50$
Shipping weight, pounds ..... 375
Code ..... Pleiteas
Duplex Trays with Backs, Standards and Plugs only ..... $\$ 31.50$
Shipping weight, pounds ..... :300

If without Porcelain Enameled Backs, deduct $\$ 6.00$.
Nickel Plated Fuller Wash Tray Bibbs and Flanges, per pair, $\$ 2.50$.

## Dimensions:

Front to back (inside), $213 / 4$ inches; (outside), $251 / 2$ inches; length inside, $2: 3$ inches; length over all, $491 / 4$ inches; depth inside, $143 / 4$ inches; height from floor to top of rim, $31 \frac{1}{4}$ inches.

## PORCELAIN ENAMELED WASH TRAYS.



1512-C.

Porcelain Enameled Flat Rim Wash Trays, with Painted Pedestals; Nickel Plated Soap Dishes; Nickel Plated Waste Plugs and Couplings, with Rubber Stoppers; Nickel Plated Fuller Wash Tray Bibbs and Flanges; Nickel Plated Continuous Waste and Vented S Trap.


| Pleitrede | Plejaden | Plektron |
| :---: | :---: | :---: |
| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ |
| $\$ 20.00$ | 38.00 | 54.25 |
| 230 | 460 | 690 |
|  |  |  |
| Plektune | Plektwant | Plektyel |
| $\$ 11.00$ | 22.00 | 33.00 |
| 155 | 310 | 465 |

Nickel Plated Fuller Wash Tray Bibbs and Flanges, per pair, $\$ 2.50$.

## Dimensions:

Front to back (inside), 22 inches; (outside), $251 / 2$ inches; length inside, 23 inches; length over all (set of three trays), 78 inches; depth inside, $14 \frac{1}{4}$ inches; height from floor to top of rim, $31 \frac{1}{4}$ inches.

## IMPROVED CEMENT WASH TRAYS.



## 1514-C.

Cement Wash Trays, all in one piece, with polished Zinc Rims; each Tray cut for hot and cold water Wash Tray Bibbs; Plain or Galvanized Iron Legs; Waste Plug and Coupling, with Rubber Stopper. All Trays are 24 inches wide and 16 inches deep.

## ONE.PART TRAYS.



For Plain Iron Legs, add $\$ 0.75$ each.
For Galvanized Iron Legs, add $\$ 1.50$ each.
For Wood Covers, add $\$ 1.50$ each.
These Trays are made of the best Portland Cement, the Concrete is of uniform thickness, and is thoroughly pressed. They have rounded rims of heavy Zinc, and the corners in Trays are rounded inside and out.

## H. M. \& S. GALVANIZED STEEL WASH TRAYS.



1516-C.

Galvanized Steel Wash Trays, with Plain Wood Rim, Turned Legs and Bottom Boards.

Size of each Tray inside: Width, 22 inches; length, 23 inches; depth, 14 inches; height from floor to top of rim, 32 inches; width over all, $271 / 2$ inches.


These Trays are made of heavy galvanized steel, securely fastened to the wood rim, the front edge of each Tray is set into the under side of the wood rim, thus preventing water from splashing out between Tray and rim. The rim and bottom board are held together with iron rods.

## PORCELAIN ENAMELED SLOP SINKS.



1520 - C .

Porcelain Enameled Inside Roll Rim Slop Sink, with 15-inch Porcelain Enameled Back, on Trap Standard with Cleanout and 2 -inch Nickel Plated Vent Connection to IVall; Nickel Plated Strainer; Nickel Plated Fuller Bibbs and Flanges.

| Code. <br> Size, inches | Plexaure $16 \times 20$ | Plexerunt $18 \times 22$ | Plexiform $20 \times 22$ | Plexibilus $20 \times 24$ | Plexilis $20 \times 30$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Complete as described....................... | \$18.50 | 20.50 | 21.50 | 22.50 | 26.00 |
| Shipping weight, pounds. | 117 | 128 | 132 | 140 | 16.) |
| Code.. | Plexilium | Plexisti | Plexo | Plexuisse | Plexuram |
| If Enameled all over, add... | \$5. 00 | 5.00 | 5. 50 | 5.50 | 6.00 |

If without Nickel Plated Bibbs and Flanges, deduct, per pair, $\$ 2.50$.
If with Concealed Galvanized Air Chambers, add, per pair, $\$ 2.00$.

## PORCELAIN ENAMELED SLOP SINK.


$\dagger$ 1521-C.

Porcelain Enameled Inside Roll Rim Slop Sink, with 15 -inch Porcelain Enameled Back and Right Hand End Piece, on Trap Standard with Cleanout and 2-inch Nickel Plated Vent Connection to Wall; Nickel Plated Strainer; Nickel Plated Fuller Bibbs and Flanges.

| Code $\qquad$ Size, inches | $\begin{aligned} & \text { Pliancy } \\ & \mathbf{1 6 x 2 0} \end{aligned}$ | $\begin{aligned} & \text { Pliasses } \\ & \mathbf{1 8 x 2 2} \end{aligned}$ | $\begin{aligned} & \text { Plicabar } \\ & \mathbf{2 0 \times 2 2} \end{aligned}$ | $\begin{aligned} & \text { Plicandos } \\ & \mathbf{2 0 \times 2 4} \end{aligned}$ | Plicate <br> $20 \times 30$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Complete as described. | \$20.50 | 22.50 | 23.50 | 24.50 | 28.00 |
| Shipping weight, pounds | 167 | 180 | 193 | 210 | 220 |
| Code. | Plicatif | Plicatule | Plichten | Pliform | Plighted |
| If Enameled all over, add | \$5.00 | 5.00 | 5.50 | 5.50 | 6.00 |
| Shipping weight, pounds. | 200 | 220 | 230 | 236 | 245 |

If without Nickel Plated Bibbs and Flanges, deduct, per pair, $\$ 2.50$.
If with Concealed Galvanized Air Chambers, add, per pair, $\$ 2.00$.
$\dagger$ Carried in San Francisco only.

In Orders and Specifications give Plate Numbers and Sizes.

## PORCELAIN ENAMELED SLOP SINK.


$\dagger 1522 . \mathrm{C}$.

Porcelain Enameled Inside Roll Rim Slop Sink, with 15 -inch Porcelain Enameled Back and Left Hand End Piece on Trap Standard, with Cleanout and 2-inch Nickel Plated Vent Connection to Wall; Nickel Plated Strainer; Nickel Plated Fuller Bibbs and Flanges.

| Code $\qquad$ Size, inches | $\begin{aligned} & \text { Plinthes } \\ & 16 \times 20 \end{aligned}$ | $\begin{aligned} & \text { Plintote } \\ & 18 \times \mathbf{2} \end{aligned}$ | Plipiabo <br> 20x22 | $\begin{aligned} & \text { Plisimi } \\ & \mathbf{2 0 x} \mathbf{2 4} \end{aligned}$ | Plistinus $20 \times 30$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Complete as described. | \$20.50 | 22.50 | 23.50 | 24.50 | 28.00 |
| Shipping weight, pounds | 167 | 180 | 193 | 210 | 220 |
| Code. | Ploccano | Ploccasse | Plochions | Plodebare | Plodendos |
| If Enameled all over, add | \$5.00 | 5.00 | 5.50 | 5.50 | 6.00 |
| Shipping weight, pounds. | 200 | 220 | 230 | 236 | 245 |

If without Nickel Plated Bibbs and Flanges, deduct, per pair, $\$ 2.50$.
If with Concealed Galvanized Air Chambers, add, per pair, $\$ 2.00$.
$\dagger$ Carried in San Francisco only.

## PORCELAIN ENAMELED SLOP SINK.


1524.C.

Porcelain Enameled Inside Slop Sink, with Roll Rim on all sides, on Trap Standard with Cleanout and 2-inch Nickel Plated Vent Connection to Wall; Nickel Plated Strainer.


## SQUARE SLOP SINK.



1526-C.

Porcelain Enameled Flat Rim Square Slop Sink, with End Outlet, Nickel Plated Strainer and Coupling for Lead Pipe.

| Code | Plomizo | Plomosos | Plonged | Plongeur | Plomure | Ploquer |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | 16x16x10 | 20x16x12 | 20x20x12 | 24x20x12 | $\dagger 30 \times 20 \times 12$ | +36x20x12 |
| Outlet, inches................ | 2 | 2 | 2 | + | + | 4 |
| Each. | \$4.50 | 6.00 | 6.90 | 7.25 | 10.50 | 12.75 |
| Weight each, pounds..... | 41 | 51 | S0 | 8.5 | 10.7 | 124 |

## PAINTED INSIDE AND OUTSIDE.

| Code | Plorabo | Plorabunt | Plorandus | Plorarem |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 16x16x10 | 20x16x12 | 20x20x12 | $2+500 \times 12$ |
| Outlet, inches | 2 | 2 | $\geq$ | 4 |
| Each. | \$..70 | 4.00 | 4.50 | 5.00 |
| Weight each | 36 | 46 | 75 | 78 |

[^24]
## GREASE TRAPS.



Cast Iron Grease and Sewer Traps, Painted inside and out, with Brass Hand Hold Cover.

| Code. | Plorator |
| :---: | :---: |
| Each.. | \$7.00 |
| Weight each, pounds........... | 80 |

## Dimensions:

Diameter, $161 / 2$ inches; height, 13 inches.

## 1528-C.

Cast Iron Porcelain Enameled Inside Grease Trap, with Polished Brass Inlet and Outlet Connections, with Removable Top and Swivel Bolts.

Code. $\qquad$ Ploravero
Each $\$ 13.00$
W'eight each, lbs. 69

Can also be furnished Enameled all over with Nickel Plated Trimmings.

## Dimensions:

Body, 10 inches square, 10 inches deep; connections, 1 ¹/2 inches.

1529.C.

## GREASE TRAP.

NICKEL-PLATED BRASS.



## Dimensions:

Body of trap, 10 inches high; diameter, 5 inches; connections, 2 inches.

Code
Each
Shipping weight each, lbs...................... 38
Net weight, lbs.
23

## IRON STONE GLAZED GREASE TRAP.

## WITH REMOVABLE COVER.

Use 3 -inch Iron Stone Sewer Pipe to connect Grease Traps with the lateral sewer. Inside diameter of Inlet and Outlet, 3 inches.

| Code. | Plostella | Plostrabor |
| :---: | :---: | :---: |
| Number | 1 | 2 |
| Inside diameter, inches. | 12 | 16 |
| Depth, inches. | 13 | 18 |
| Capacity, gallons. | 3 | 7 |
| Each | \$4.00 | 5.00 |
| Weight each, lbs. | 40 | 66 |


1531. 1.
$\dagger$ Carried in San Francisco only.

## GREASE INTERCEPTORS.



Cast Iron, Painted Inside and Outside Grease Interceptor, with 4-inch Hub Inlet and Outlet, Brass Clamps and Heavy Rubber Disc.

| Code. | Plotful | Plotium |
| :---: | :---: | :---: |
| Numbers | 1 | 3 |
| Size, inches. | $21 \times 18$ | $311 / 2 \times 211 / 2$ |
| Depth, inches | 18 | 181/2 |
| Each | \$25.00 | 37.50 |
| Weight each, | $26^{1 / 2}$ | 378 |



Sectional View of $\mathbf{1 5 3 2 - C}$.
The above is designed for Hotels and large Private Establishments where there is a large amount of grease passing through the pipes, Kitchen, Butler's Pantry or Scullery Sinks; it is intended to be placed at some convenient point where the Main Pipe from all the Sinks can be connected. By reference to sectional cut it can readily be seen how the fatty matter can be disintegrated and intercepted, first by dropping into a large body of cold water, then by being driven against the center partition before an outlet can be gained. The specific gravity of the fat naturally carries it to the surface in a chilled condition, where it collects to be removed as often as may be necessary. The Inlet and Outlet are placed at one end of the box in order to leave a large space comparatively undisturbed for the accumulation of fat or grease.

+ Carried in San Francisco only.

$\dagger$ 1536. C.


## MARQUIS PATTERN SLOP HOPPER.

WITH STRAINER AND BELL TRAP. REMOVABLE BASKET PAINTED IRON.



## Dimensions:

Diameter at top, $131 / 2$ inches; depth of basket, $91 / 2$ inches; height from floor to top of rim, $123 / 4$ inches.


## BAILEY PATTERN SLOP HOPPER.

WITH BELL TRAP. REMOVABLE BASKET. PAINTED IRON.<br>Code........................................................ Ploxema<br>Diameter, inches .................................................... 13<br>Each......................................................................... \$5.00<br>Weight each, pounds.......................................... 64

1537-C.


## CHAMPION OVERFLOW HOPPERS.

```
WHITE ENAMELED INSIDE AND ON TOP OF RIM. REMOVABLE PATENT OVERFLOW AND STRAINER.
```

2-inch Outlet.

| Code | Plucheux | Pluchia | Pluchon |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
| Top, inches. | $13 \times 151 / 2$ | $12 \times 14$ | $11 \times 12$ |
| Height, inches | 14 | 12 | 11 |
| Each. | \$4.25 | 4.00 | 3.75 |
| Weight each, pounds | 35 | 30 | 25 |

$\dagger$ Carried in San Francisco only:
1538.C.

In Orders and Specifications give Plate Numbers and Sizes.

## "MENLO", SLOP HOPPERS.

## PAINTED IRON, REMOVABLE STRAINERS, WITH OR WITHOUT BELL TRAPS.



1540-C.
Style of Nos. 1, 2, 3.


1541-C.
Styles of Nos. 4,5 .

## MENLO SLOP HOPPERS, WITH STRAINERS AND BELL TRAPS.

| Code, 2 -inch | Plumabor | Plumagem | Plumajear | Plumassar | Plumatelle |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code, 3 -inch outlet. | Plumatoris | Plumaturo | Plumaverit | Plumazas | Plumazone |
| Code, 4 -inch outlet. | Plumbando | Plumbavit | Plumbeas | Plumbeo | Plumbery |
| Number | 1-T. | 2-'T. | 3-T. | 4-T. | j- 'T. |
| Each | \$2.40 | 2.20 | 1.80 | 1.50 | 1.20 |
|  | 26 | 21 | 18 | 15 | 12 |

MENLO SLOP HOPPERS, WITH STRAINERS ONLY.

| Code, 2-in | Plumesco | Plumicolle | Plumicorn | Plumifera | Plumigene |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code, 3 -inch outlet.. | Plumiped | Plumipedi | Plumitarse | Plummet | Plumosite |
| Code, $t$-inch outlet.. | Plumotage | Plumoter | Plumpsen | Plumula | Plumuleux |
| Number............... | 1 | 2 | 3 | 4 | j |
| Each | \$2.40 | 2.20 | 1.80 | 1.50 | 1.20 |
| Weight each, poun | 22 | 18 | 16 | 12 | 10 |

EXTRAS FOR MENLO SLOP HOPPERS.

| Numbers | 1 | $\geq$ | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Strainers with Bell Traps................... | \$0.60 | . 60 | . 60 | . 50 | .50 |
| Strainers only.. | . 40 | . 40 | . 40 | . 30 | . 30 |

## Dimensions:

No. 1, length, 14 inches; width, 13 inches; height, 13 inches.
No. 2, length, $131 / 2$ inches; width, 12 inches; height, $111 / 2$ inches.
No. 3, length, 13 inches; width, 11 inches; height, 10 inches.
No. $t$, length, $101 / 2$ inches; width, $93 / 8$ inches; height, $93 / 4$ inches.
No. 5, length, $91 / / 4$ inches; width, $83 / 4$ inches; height, $61 / 2$ inches.
Made with 2, 3, or 4 -inch outlets.

## CESSPOOLS.





1546-C.
CESSPOOL WITH BELL TRAP AND ROUND HINGED GRATING.

| Code. | Pluquet | Plural |
| :---: | :---: | :---: |
| Size, inches. | 9x9 | $13 \times 13$ |
| Outlet, inches. | 3 | 4 |
| Each. | \$1.35 | 2.50 |
| Weight each, lbs.. | 13 | 18 |

1548-C.
CESSPOOL WITH BELL TRAP AND SQUARE GRATING.
Code. ..... Plurales
Size, inches. ..... $15 \times 15$
Outlet, inches4
Each ..... $\$ 2.00$Weight each, lbs.
$\qquad$

STENCH TRAP.


1550-C
STENCH TRAP WITH HINGED STRAINER AND BELL.

| Code. | Pluralize |
| :---: | :---: |
| Size, inches | $6 \times 6$ |
| Outlet, inches | 2 |
| Each | \$1.00 |
| Weight each, | 6 |

HYDRANT CESSPOOLS.

$+15 \mathrm{5}+\mathrm{C}$.
HYDRANT CESSPOOL WITH STRAINER; PAINTED INSIDE.

| Code................. | Pluribus | Plurielle | Plurigam |
| :--- | :---: | :---: | :---: | :---: |
| Size, inches......... | $\mathbf{1 2 x 1 2 x 6}$ | $\mathbf{1 4 \times 1 4 x 6}$ | $\mathbf{1 6 x 1 6 x 6}$ |
| Each......................... | $\$ 1.00$ | 1.25 | 1.50 |
| Weight each, lbs... | 13 | 16 | 20 |

$\dagger$ Carried in San Francisco only.

## FLOOR DRAIN WITH TRAP.



1552-C.
CAST BRASS FLOOR DRAIN WITH TRAP.
Code.
Pluranio
Diameter of Top, inches.................... 9
Depth, inches....... ............................. 8
Outlet, inches....................................... 2
Each................................................. $\$ 10.00$
IVeight each, lbs................................. 13
Polished top. Outlet threaded for iron pipe.

## SURFACE DRAINS.



1556-C.
SURFACE DRAINS WITH HINGED COVER NO BELL

| Code | Plurilobe | Plurilute |
| :---: | :---: | :---: |
| Size, inches................... | $6 \times 6$ | 9x9 |
| Each.......................... | \$0.75 | 1.00 |
| Weight each, lbs............. | $51 / 2$ | 12 |

## CESSPOOL PLATES.


1558.C.

Square Cesspool Plate with Holes.

1559.C.

Round Cesspool Plate with Holes.


1560-C.
Square Cesspool Plate with Bars.


ROUND CESSPOOL PLATES WITH HOLES, 1559.C.

| Code | Plusage | Plusculos | Pluseuse | Plusimo |
| :---: | :---: | :---: | :---: | :---: |
| Diameter, | 6 | 8 | 10 | 12 |
| Each... | \$0.30 | . 60 | . 80 | 1.00 |

Weight each, pounds
SQUARE CESSPOOL PLATES WITH BARS, 1560.C.

| Code Size, inches. | Plussiez $6 \times 6$ | Plutarcho 6xS | Plutarque 8x8 | $\begin{aligned} & \text { Pluteum } \\ & 10 \times 10 \end{aligned}$ | Plutonian $12 \times 12$ | Plutoribus $14 \times 14$ | $\begin{aligned} & \text { Pnemmat } \\ & \mathbf{1 6 \times 1 6} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.30 | . 50 | . 60 | . 80 | 1.00 | 1.20 | 1.50 |
| Weight each, pounds |  | \% |  |  |  |  |  |

## VENTILATING BOXES.



1561-C.
A Solid Box Grating and Frame, all in one Piece.

| Code | Pueumatage |
| :---: | :---: |
| Size, inches.. | 81/2 $\times 1.1 / 2$ |
| Each.. | \$1.00 |
| Weight each, pounds................ | $83 / 4$ |



1562-C.
Ventilating Boxes with Removable Grates.

| Code. | Preumatell |
| :---: | :---: |
| Size, inches. | $15^{1 / 4} \times 15^{1 / 4}$ |
| Each. | \$4.00 |
| Weight each | : 4 |

## STREET WASHER BOXES.

PLAIN CAST IRON.



1564-C.
Code PneumaticoSize, inches.$10 \times 10$
Each ..... $\$ 1.20$
Weight each, pounds ..... 10

## SIDEWALK BOXES.

PLAIN CAST IRON.


1566-C.
Sidewalk Box with Solid Chained Cover.

| Code........... | Pneumatod | Pneumique | Pneumores |
| :--- | :---: | :---: | :---: |
| Size, inches... | $\mathbf{8 x 8}$ | $\mathbf{9} 1 / 2 \mathbf{x 9} 1 / 2$ | $\mathbf{1 2 \times 1 2}$ |
| Each.......... | $\$ 0.80$ | 1.20 | 2.00 |
| Wht. each, lbs., | $61 / 2$ | $81 / 2$ | 15 |



1567-C.
Sidewalk Box with Perforated Chained Cover.

| Code............... | Pneumose | Pniglion | Pniseos |
| :--- | :---: | :---: | :---: |
| Size, inches....... | $\mathbf{8 x 8}$ | $\mathbf{9} 1 / 2 \mathbf{x 9} 1 / 2$ | $\mathbf{1 2 \times 1 2}$ |
| Each...................... | $\$ 0.80$ | 1.20 | 2.00 |
| Wt. each, lbs..... | 6 | 8 | $131 / 2$ |

## SIDEWALK BOX COVERS.

```
SOLID OR PERFORATED.
```

| Code for Solid. | Pnigite | Pnigitis | Poacite |
| :---: | :---: | :---: | :---: |
| Code for Perforated | Pobeda | Poblacho | Pobladas |
| Size, inches. | $47 / 8$ | $61 / 4$ | $83 / 4$ |
| Fits Boxes, inches | 8 x 8 | $91 / 2 \times 91 / 2$ | $12 \times 12$ |
| Each | \$0.25 | . 35 | . 60 |
| Weight each, pounds | 11/4 | 2 | +3/4 |

## SECTION 6.

RANGE BOILERS,
WATER BOILERS,

## WATER HEATERS

AND RADIATORS.


Holbrook, Merrill \& Stetson, INCORPORATED.

## RANGE BOILERS, WATER HEATERS, ETC.

Electric Weld Range Boilers are the best that genius and modern mechanical devices can produce.

Water Boilers and Heaters shown on the following pages are of the most approved and salable designs, but we can furnish on short notice many other styles and sizes.

Radiation shown is carried in stock and we are prepared to furnish other styles and heights.

In ordering goods from this section by telegraph it is only necessary to use the code word over or opposite the number or name of the article wanted preceded by words from the code in front of this book.

Example: Crogmar one Pobretao and Podometre.
Translation: Ship via quickest route one thirty-gallon galvanized boiler and adjustable stand.

## ELECTRIC WELD GALVANIZED RANGE BOILERS.

Electric Welding has entirely superceded the older methods, because it does absolutely perfect work. This fact has been long recognized by engineers, the only obstacles being the ingenuity, experimental work and great outlay required to adapt this wonderful agent to the work in hand.

Realizing the weakness of the riveted seam in Range Boiler Construction, we cast about for a Boiler improved at this vital point, and finally, after exhaustive investigation, convinced ourselves that Electric Welding would settle the question beyond all dispute, with the result that we are furnishing a boiler that is practically a seamless tube, stronger and more dependable than a piece of pipe, or a seamless drawn tube, as the weld is stronger than the body of the sheet by reason of its greater sectional area and the gauge of the plate is uniform, which is not the case in a drawn tank or tube.

The heads and bottoms are made a trifle larger in diameter than the shell, the end of which is expanded by heating in a furnace; the head or bottom then put in, the shell shrinking down to an absolute iron to iron fit in cooling, the heads and bottoms are then riveted just as securely as in any other boiler; this insures the plumber that when he gets a boiler he can depend upon its being tight.

The gauges of the material entering into the construction of Electric Weld Boilers are equally as heavy and in some instances heavier than those used for riveted boilers.

A Standard Electric Weld Boiler will not weigh as much as some of the riveted boilers of same capacity for these reasons: In the first place, there are no rivets in the side seam, which saves about three pounds in weight; next, the plates are from one and one-half to two and one-half inches shorter, as there is no lap required for riveting, saving from two to three pounds more; finally, the side seams do not have to be brazed, saving another pound in brass, or a total saving of from six to seven pounds in weight, that adds no value to the wearing qualities or life of the boiler. In other words, if the average weight of the 30 -gallon Standard Electric Weld Boiler is 70 pounds, it would be equal to about a 75 -pound riveted boiler.

The Electric Weld Boiler is not a cheap one. It costs more than any other to build, but it is the best and most dependable boiler made. It is stronger and will test to pressures that would tear a riveted boiler apart.

Electric Weld Boilers are made in sizes up to and including 6:3 gallons. Larger sizes are riveted and brazed with hard brass solder, making the best possible construction in riveted boilers.

We guarantee these Boilers against defects either in material or construction, and will cheerfully replace any goods failing from these causes if used under conditions for which they are recommended.

## Showing Electric Weld Seam.



## ELECTRIC WELD GALVANIZED RANGE BOILERS.

STANDARD. 200 POUNDS TEST. GUARANTEED FOR ONE YEAR UNDER MAXIMUM
WORKING PRESSURE OF 80 POUNDS. WORKING PRESSURE OF 80 POUNDS.


1600-C.

| Code. | Capacity, Gallons. | Diameter, | Height, Feet. | Tapped, Inches. | Shipping <br> Weight, Lbs. | Shipping Measurement, Cubic Feet. | Each. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pobleis..... | 18 | 12 | 3 | 1 | 47 | $21 / 3$ | \$ 14.50 |
| Poblicum.... | 21 | 12 | $31 / 2$ | 1 | 49 | $22 / 3$ | + 15.50 |
| Poblilia....... | 24 | 12 | 4 | 1 | 57 | 3 | 15.75 |
| Pobretao.... | 30 | 12 | 5 | 1 | 70 | 4 | 19.00 |
| Pobretear.................. | $\pm 0$ | 14 | 5 | 1 | 86 | $51 / 3$ | 24.00 |
| Pobreza...... | 52 | 16 | 5 | 1 or $11 / 4$ | 128 | 7 | 31.00 |
| Pobrismo .. | 53 | 18 | 4 | 1 or 11/4 | 128 |  | 31.50 |
| Pocharder ... | 63 | 16 | 6 | 1 or $11 / 4$ | 122 | $81 / 2$ | 38.00 |
| Pochbrett ......... ........ | 66 | 18 | 5 | 1 or 11/4 | 150 | 9 | 38.00 |
| Pochereth.... | 82 | 20 | 5 | $11 / 4$ or $11 / 2$ | 177 | 11 | 45.50 |
| Pocherz...... | 100 | 22 | 5 | $11 / 4$ or $11 / 2$ | 185 | $131 / 3$ | 63.50 |
| Pochettes ................. | 120 | 24 | 5 | $11 / 2$ | 265 | 16 | 72.50 |
| Pochetto...... | 144 | 24 | 6 | $11 / 2$ | 332 | 19 | 103.00 |
| Pocheuses........, . | 192 | 24 | 8 | $11 / 2$ | 391 | $571 / 3$ | 132.00 |

Electric Weld Boilers are made in all sizes up to and including 63 gallons.
Larger sizes are riveted and brazed.

## ELECTRIC WELD GALVANIZED RANGE BOILERS.

## EXTRA HEAVY, 250 POUNDS TEST.

Guaranteed for one year under maximum working pressure of 150 pounds.

1601.C.


Electric Weld Boilers are made in all sizes up to and including 63 gallons. Larger sizes are riveted and brazed.

## HORIZONTAL GALVANIZED RANGE BOILERS.

DOUBLE RIVETED AND BRAZED.


1603-C.
Tapped as required. Tested to any pressure. Sizes and lists same as given on page 432. Prices on application.

## LARGE GALVANIZED BOILERS OR HOT WATER TANKS.

For Flats, Hotels, Apartment Houses, Office Buildings, Etc.
Made in all shapes and sizes.

| Code. | Capacity, Gallons. | Diameter, Inches. | Height, Feet. | Shipping Weight, Lbs. | Shipping Measurement, Cubic Feet. | Each. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pockengift....................... | 120 | 24 | 5 | 490 | 16 |  |
| Pockenholz ...................... | 145 | 24 | 6 | 560 | 19 | $\dot{\square}$ |
| Pocketed .......................... | 170 | 24 | 7 | 660 | $221 / 2$ | O |
| Pocketful...... ..... ............. | 180 | 30 | 5 | 660 | 25 | T |
| Pocketing......................... | 215 | 30 | 6 | 740 | 30 | . |
| Pockmark......................... | 250 | 30 | 7 | 840 | 35 | 2 |
| Pockwood ........................ | 300 | 30 | 8 | 940 | 40 | < |
| Podaban ........................... | 325 | 36 | 6 | 940 | 431/6 | E |
| Podagra...... ...................... | 365 | 36 | 7 | 1040 | $501 / 2$ | 8 |
| Podagroso........................ | 420 | 36 | 8 | 1140 | $571 / 2$ | $J$ |
| Podagrous.. ........ . ............ | 430 | 42 | 6 | 1240 | 59 | $\ddot{0}$ |
| Podarges...... .................... | 575 | 42 | 8 | 1500 | $781 / 2$ | 2 |
| Podasteis......................... | 720 | 42 | 10 | 1700 | 98 | C |
| Podaxon........................... | 940 | 48 | 10 | 2000 | 128 |  |

Tapped as required. Tested to any pressure. Handholes or manholes furnished when desired, at extra cost.


BOILER RINGS.
PLAIN CAST IRON.
Tapped for Iron Pipe.
1600.C.

| Code | Podebusk | Podengo | Poderale | Podestat | Podetion | Podiceps | Podiebrad |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For boilers, gallons........... | 18 to 30 | 40 | 52 to 63 | 66 | 82 | 100 | 120 to 192 |
| Size, inches. | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| Tapped for pipe, inches...... | 1/2 | 1/2 | 1 | 1 | 1 | 1 | 1 |
| Each. | \$0.35 | . 55 | 1.40 | 1.75 | 2.35 | 3.00 | 4.25 |
| Weight each, lbs. | 3 | 7 | 11 | 16 | 20 | 27 | 41 |

## BOILER STANDS.



1606-C.
Lockwood's Improved. Plain Cast Iron.


1607-C.
Modern Adjustable. Plain Cast Iron.

| LOCKWOOD'S IMPROVED BOILER STANDS-1606-C |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code | Podismabo | Podismes | Podisome | Podocarpo | Podochilo | Podology | Podomales |
| Size of boiler, gallons.. | 18, 21, 24 or 30 | 40 | 52,53 or 63 | 66 | 82 | 1001 | 120, 144 or 192 |
| Size of ring, inches.. | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| Height, inches.. | 19 | 19 | 19 | 22 | 23 | 23 | 24 |
| Each | \$1.25 | 1.40 | 1.75 | 2.00 | 2.25 | 2.50 | 3.00 |
| Shipping weight, lbs.... | 11 | 12 | 21 | 21 | 27 | 35 | ...... |

MODERN ADJUSTABLE BOILER STAND--1607-C.
The adjustable Side Arms allow of the setting of Stand level on floor without blocking.



## MENLO BOILER STANDS.

Plain Cast Iron.
Tapped for $1 / 1 / 4$-inch Iron Pipe.

| C | Podophule | Podopses |
| :---: | :---: | :---: |
| Size boiler, gallons. | 30 | 40 |
| Size of ring, inches. | 12 | 14 |
| Each. | \$1.50 | 2.00 |
| Shipping weight, lb | 12 | 15 |

Price includes ring, yoke and base.

1608-C.
In Orders and Specifications give Plate Numbers and Sizes.

## LA WSON GAS WATER HEATERS.

FOR HEATING WATER WITH NATURAL OR MANUFACTURED GAS.

To be Used in Connection with an Ordinary Range Boiler.

1630.C.

Showing Design for Manufactured Gas.


1631-C.
Showing Design for Natural gas.

The interior construction of Heater for Natural or Manufactured Gas is the same.
A coil of best seamless drawn copper tubing provides ample heating surface and possesses many advantages over cast iron devices, iron pipes, etc. Not only being a better heat conductor, but reducing the number of water joints to a minimum. It can be readily connected to any domestic boiler without using special connections or fittings. Each heater is fitted with ground-joint brass unions. The conical deflector forces the flames and heated air to circulate close to the coil and prevents downdraft. The jacket is lined with asbestos, which prevents the escape of heat. Either Russia Iron or Copper Jackets can be supplied. The top and bottom are cast iron.

The burners produce maximum heat with minimum gas consumption.
FOR MANUFACTURED GAS WITH RUSSIA IRON JACKET.

| Code | Poetiche | Poeticos | Poeticule | Poetisch |
| :---: | :---: | :---: | :---: | :---: |
| Number | 1 | $11 / 2$ | 2 | 3 |
| Diameter, inches. | 8 | 8 | 8 | 8 |
| Height, inches | 15 | 18 | 20 | 24 |
| Tube, inches. | 3/4 | 3/4 | 3/4 | 3/4 |
| Capacity, gallons. | 30 | 30 to 40 | 40 to 50 | 50 to 100 |
| Each..... | \$12.50 | 15.00 | 20.00 | 30.00 |
| Shipping weight ea | 16 | 20 | 23 | 36 |

FOR NATURAL GAS WITH RUSSIA IRON JACKET.


One in a crate.
$\dagger$ Carried in San Francisco only.

## LAWSON THERMOSTATIC VALVE.

FOR NATURAL OR MANUFACTURED GAS.


1632-C.

## LAWSON THERMOSTATIC VALVE.

Many gas water-heaters waste more gas than is necessary to heat the water.

Servants neglect to turn down the gas when the water in the boiler has been heated to the required temperature.

The Lawson Thermostatic Valve not only turns off the gas when the water has been heated, but turns it on again when the temperature falls below the desired point.

It may be set to turn the gas on or off at any temperature, and be attached to the Lawson Heater for natural or manufactured gas. No pilot light is used-simply a small by-pass valve, which can be adjusted to allow a small flame to burn when the main valve is closed.

By this method, the heat usually wasted by the pilot light is utilized by being conveyed to the burner, thus keeping the water in the boiler hot.

The saving of gas effected by this device will pay for it in a short time.

| Code | Poggiando | Poggiassi |
| :---: | :---: | :---: |
| Style | Manufactured Gas | $\dagger$ Natural Gas |
| Size, inch.............. | 1/2 | 3/8 |
| Each. | \$9.00 | 7.00 |
| Weight each, lbs.... | $61 / 2$ | 3 |


1633.C.

Showing proper way to connect the Lawson Gas Water-heater and Thermostatic Valve to Boiler for either Natural or Manufactured Gas, placing the Thermostatic Valves in the bottom of the Boiler.
$\dagger$ Carried in San Francisco only.

## INTERNATIONAL DOMESTIC WATER HEATERS.



Cast Iron Top and Base, No. 26 Planished Iron Body, $3 / 4$-inch Special Wrought Iron Pipe Coil with inlet and outlet threaded for Standard Iron Pipe. Top Collar takes 6 -inch stove pipe. Bottom Collar so made that it can be cut to fit any stove or range collar taking from 6 to 7 -inch stove pipe.
Code. Pogingen
Height, inches ..... $281 / 2$
Diameter, inches. ..... $101 / 2$
Each ..... $\$ 10.00$
Shipping weight each, lbs ..... 44
Shipping measurement each, cubic feet ..... 2

> One in a crate.

These Heaters are designed for use with stoves and ranges having no water-backs or where water-backs are impracticable, at the same time utilizing the waste heat.

They can be used in connection with heating stoves as well as with cooking stoves and ranges.
When placed on an ordinary stove or range they will give sufficient hot water for kitchen use or for use in lavatories or in bedrooms in ten minutes from the time the fire is started and they will heat an ordinary 30 -gallon boiler in 30 minutes. They are great fuel-savers.

## "RAPID" INSTANTANEOUS WATER HEATERS.

FOR MANUFACTURED GAS.



1642-C.
The "Rapid" should be used with city pressure having at least ten pounds pressure to the square inch, and will heat from two to three gallons of water per minute, raising the temperature 60 or 65 degrees.

These heaters will utilize 92 out of a possible 100 heat units.

No Vent Pipe or Flue is required with a 'Rapid" Heater. However, to those prejudiced in favor of a vent pipe, the "Rapid" is so constructed as to admit of its use.

Sufficient water for a bath (about twenty gallons) can be heated in five minutes at a cost of one cent with gas at $\$ 1.00$ per 1000 feet.

Send for special catalogue of "Rapid" Heaters.

Body made of Heavy Copper and Brass, Polished and Nickel-Plated. Burner is made of Fine Gray Iron. Nickel-Plated Shelf and Bracket. Nickel-Plated New Duplex Gas and Water Valves with Unions.

Rapid Self-Cleaning Sprayer, high pressure double stuffing box and one piece water shed.

| Code. | Pogonate |
| :---: | :---: |
| Model.......................................... | C |
| Height, inches........................... | 30 |
| Diameter, inches....... .............. .. | $101 / 2$ |
| Each, complete. | \$27.50 |
| Shipping weight, lbs | 56 |
| Shipping measurement, cubic feet.. |  |

One in a case.


Showing Construction.

## Explanatory:

1. Pilot Light Valve.
2. Pilot Light Valve Tube.
3. Gas Valve.
4. Water Valve
5. Burner Plate (upper).
6. Burner Plate (lower).
7. Gas Chamber.
8. Retort Tubes.
9. Gas Nipples.
10. Stand Pipe.
11. Sprayer.
12. Center Cone
13. Truncated Cone
14. Perforated Baffle Plate.
15. Solid Baffle Plate.
16. Water Shed.

## CRESCENT INSTANTANEOUS WATER HEATERS.



1644-C.

Produces hot water at the rate of $21 / 2$ to 3 gallons per minute, raising from 60 degrees inlet temperature to 110 degrees outlet temperature, at a cost of $11 / 4$ cents for gas.

The heater is furnished with Duplex safety valves so that the gas cannot be turned on without the water. Also provided with an extra regulating valve to adjust the water supply and regulate the temperature.

Every Heater must be connected with a vent pipe.

Made entirely of Copper, Nickel-Plated and Highly Polished. Nickel-Plated Shelf and Brackets. Nickel-Plated Duplex Safety Valves and Unions.



1645-C.
Showing Construction.
Explanatory:
A. Gas Valve.
B. Water Valve.

C and C. Pilot.
F. Water Regulator.
G. Water Glass.

Hand I. Corrugated Coppir Tubes.
. Cold Water Supply.
K. Burner Ring.

L and L. Burner Pipes.

CRESCENT INSTANTANEOUS WATER HEATERS.

FOR MANUFACTURED GAS.


1646.C.

No. 6 Crescent heats $21 / 2$ to 3 gallons of water per minute.

No. 8 Crescent heats 2 to $21 / 2$ gallons of water per minute.

These Heaters are guaranteed to utilize over 80 per cent of the heat units of the gas.

They will heat water for a bath of 30 gallons in six to ten minutes at about $11 / 4$ cents cost for gas.

Every Heater must be connected with a vent pipe.
$\dagger$ Carried in San Francisco only.

Made entirely of Copper, NickelPlated and Highly Polished. NickelPlated Shelf and Brackets. NickelPlated Duplex Safety Valves and Unions.

| Code | Poignard | Poignets |
| :---: | :---: | :---: |
| Numbers. | 6 | +8 |
| Height, inches. | 30 | 30 |
| Diameter, inches..... | 12 | $101 / 2$ |
| Each | \$25.00 | \$20.00 |
| Shipping weight, lbs. | 65 | 45 |
| Shipping measure- |  |  |
| ment, $\mathrm{cu} . \mathrm{ft}$... | $61 / 2$ | $41 / 2$ |

One in a case.


1647-C.
Showing Construction.

## Explanatory:

A. Gas Valve.
B. Water Valve.
C. Water Regulator.
D. Pilot Pipe.
E. Burner Ring.

F and F . Burner Pipes.
$G$. Drip Ring.
I. Conical Heating Tube.
J. Disc to retard and spread passing heat.
K. Perforated Copper Screens.
L. Revolving Water Distributor.
M. Disc to carry falling water to Tube I.

## CRESCENT INSTANTANEOUS WATER HEATERS.

FOR GASOLINE.

$\dagger$ 1648. C.

For use in city, country and suburban homes, where gas connections cannot be had.

Will heat two gallons of water per minute from 50 degrees inlet to 100 degrees outlet temperature, and enough for a bath at an average cost of two cents for gasoline.

Every Heater must be connected with a vent pipe.

Made of Copper; Nickel-Plated and Highly Polished; Nickel-Plated Shelf and Brackets.
Code Poincon
Number 7
Height, inches 30
Diameter, inches 12

Each, complete
$\$ 29.00$

Shipping weight, each, lbs
Shipping measure, cubic feet.
Packed in two cases.


1649-C.
Showing Interior Construction.

## Explanatory:

A. Water Valve.
B. Generator Handle.
C. Burner Valve Handle.
D. Drip Cup.
E. Burner Arm.

F . Burner.
G. Water Supply Pipe.
H. Sight Hole.
I. Conical Heating Tube.
J. Disk to retard and spread passing heat
K. Perforated Copper Screens.
L. Revolving Water Distributor.

M . Disk to carry falling water to Tube I.
P. Valve to close gasoline supply.
$\dagger$ Carried in San Francisco only.

## "LAWSON" GASOLINE WATER HEATERS.

## FOR QUICKLY AND ECONOMICALLY HEATING WATER BY GASOLINE FOR HOUSEHOLD PURPOSES.

To be used in connection with an ordinary Range Boiler.

1635. - C.


One in a crate

This heater is similar in construction to the well-known Lawson Gas Heater, shown on page 439, and consists of a seamless copper coil, surrounded by an asbestos-lined Russia Iron Jacket. The burner is especially designed to meet the requirements of gasoline combustion.

For localities where gas is not available, this heater is unexcelled.
It is compact, efficient, economical and low in price. It can be readily connected, and always gives perfect satisfaction.

These heaters must be connected with a vent pipe.

## MENLO TANK HEATERS.



1620-C.



1621-C.
Showing Construction of Dome.

Dimensions:


| N | 1 | †11/2 | $\dagger 2$ |
| :---: | :---: | :---: | :---: |
| Width at floor, inches | $191 / 2$ | 22 | $241 / 2$ |
| Length at floor, inches | 191/2 | 22 | 241/2 |
| Total height, inches. | 321/2 | 34 | $351 / 2$ |
| Height of base, inches | $81 / 2$ | $81 / 2$ | $81 / 2$ |
| Height of dome, inches.......... | 24 | 251/2 | 27 |
| Outside diameter of dome, in.. | 15 | $171 / 2$ | 20 |
| Diameter of grate, inches........ | 10 | 12 | 14 |
| Depth of fire, inches.............. | 111/2 | 111/2 | $121 / 2$ |
| Diameter of smoke pipe, in.... | 5 | 5 | 6 |
| Distance from floor to center of smoke pipe, inches......... | 253/4 | $261 / 2$ | $30^{1 / 4}$ |

> 1622-C.

Showing Base and Grate Construction.
$\dagger$ Carried in San Francisco only.

## COTTAGE WATER BOILERS.

FOR WOOD OR COAL.


1625-C.
Cut shows Small Fire Door for Coal.


1626 . ${ }^{\prime}$.
Cut shows Large Fire Door for Wood.

| Nos. | Code for Coal. | * Price for Coal. | Size of Grate, Inches. | Square Feet Radiation Supplied. | Tank Capacity, Gallons. | Shipping <br> Weight, <br> Lbs. | Code for Wood. | * Price for Wood. | Nos. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00 | Poissard ..... | $\$ 52.00$ | $12 \times 12$ | 200 | 275 | 727 | Pokgist....... | \$ 54.00 | 00 |
| 0 | Poisseux .... | 63.00 | $12 \times 16$ | 275 | 375 | 780 | Pokhout...... | 65.00 | 0 |
| 1 | Poissillon ... | 73.00 | $16 \times 16$ | 350 | 450 | 980 | Pokstof ........ | 79.00 | 1 |
| $\underline{2}$ | Poissons ..... | 92.00 | $16 \times 20$ | 475 | 625 | 1111 | Polacchina... | 100.00 | 2 |
| 3 | Pokachtig... | 114.00 | 16x24 | 575 | 750 | 1291 | Polacenio..... | 123.00 | 3 |
| 4 | Pokal.... ..... | 146.00 | 20x24 | 775 | 1025 | 1639 | Polackei ...... | 156.00 | 4 |
| 5 | Pokdalig..... | 180.00 | $20 \times 30$ | 975 | 1300 | 2020 | Polacra....... | 193.00 | 5 |
| 6 | Pokeweed... | 218.00 | 20x36 | 1225 | 1600 | 2200 | Polainae ..... | 233.00 | 6 |

* The above prices are for the Boiler complete with Fire Tools, which include Flue Brush with Handle and Shovel.

Dimensions.

| Nos. | Regular Tapping. |  | Height, Inches. | Width, Inches. | Length, <br> Inches. | Diameter of Smoke Pipe, in Inches. | Distance from Floor to top of Smoke Bonnet, in Inches. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Supply, Inches. | Return, Inches. |  |  |  |  |  |
| 00 | 2-2 | 1-2 | 47 | 23 | 27 | $5^{13 / 16}$ | 271/4 |
| 0 | 1-2 2-21/2 | $1-21 / 2$ | 47 | 23 | 31 | $5^{51 / 16}$ | $271 / 4$ |
| 1 | 1-2 $2-21 / 2$ | 1-21/2 | 48 | 31 | 31 | $7^{16}$ | 31 |
| 2 | $2-21 / 2$ | $2-21 / 2$ | 48 | 31 | 35 | 7 | 31. |
| 3 | $2-21 / 2$ | 2-21/2 | 48 | 31 | 39 | 7 | 31 |
| 4 | $2-21 / 2$ | $2-21 / 2$ | 52 | 35 | 39 | 9 | 353/4 |
| 5 | $2-3$ | $2-3$ | 52 | 35 | t5 | 9 | $353 / 4$ |
| 6 | $\left\{\begin{array}{l}2-3 \\ 2-21 / 2\end{array}\right\}$ | 2-3 | 52 | 35 | 51 | 9 | $353 / 4$ |

## COTTAGE WOOD BURNING BOILERS.

These Boilers are the same as the regular Water and Steam Boilers, with the exception that they have large Fire Doors and Grate Covers. Wood Burning Boilers can be used for burning coal, as the regular grate is furnished.

## Size of Large Fire Doors:

Nos. 00 and $0 \ldots .5^{1 / 2} \times 9$ inches. Nos. 1, 2 and $3 \ldots . .103 / 4 \times 111 / 4$ inches. Nos. 4,5 and $6 \ldots .12 \times 14$ inches. For Boiler Ratings see page 450.

## COTTAGE STEAM BOILERS.

FOR WOOD OR COAL.



1629-C.


1630-C.
Cut shows Side View of Cottage Steam Boiler.

| Nos. | Code for Coal. | *Price for Coal. | Size of Grate, Inches. | Square Feet Radiation Supplied. | $\begin{gathered} \text { Shipping } \\ \text { Weight, Lbs. } \end{gathered}$ | Code for Wood. | *Price for Wood. | Nos. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00 | Polanisia | \$ 72.00 | $12 \times 12$ | 135 | 790 | Polaristic | \$ 75.00 | 00 |
| 0 | Polaques ...... | 83.00 | $12 \times 16$ | 175 | 847 | Polarizada. | 86.00 | 0 |
| 1 | Polarbaer ...... | 94.00 | $16 \times 16$ | 225 | 1164 | Polarize . | 100.00 | 1 |
| 2 | Polarchy.......... | 114.00 | $16 \times 20$ | 275 | 1305 | Polarizing.. | 121.00 | 2 |
| 3 | Polarfuchs ........ | 136.00 | $16 \times 24$ | 350 | 1438 | Polarkreis | 143.00 | 3 |
| 4 | Polaridade........ | 165.00 | $20 \times 24$ | 475 | 1863 | Polarlicht.... | 178.00 | 4 |
| 5 | Polarily........... | 200.00 | $20 \times 30$ | 600 | 2252 | Polarmeer .... | 214.00 | 5 |
| 6 | Polarisant .... ... | 238.00 | $20 \times 36$ | 750 | 2614 | Polarstern ....... | 253.00 | 6 |

* The above prices are for the boiler complete, with trimmings and connections as shown, together with fire tools, which include flue brush with handle and shovel.

DIMENSIONS.

| Nos. | **Regular Tapping. |  | Height in Inches. | Width in Inches. | Length in Inches. | Height Water Line in Inches. | Diameter of Smoke Pipe in Inches. | Distance from Floor to Top of Smoke Bonnet in Inches. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Supply, Inches. | Return, Inches. |  |  |  |  |  |  |
| 00 | 1-2 | 1-2 | 47 | 23 | 27 | $411 / 2$ | $513 / 16$ | $27^{1 / 4}$ |
| 0 | $1-21 / 2$ | $1-21 / 2$ | 47 | 23 | 31 | $411 / 2$ | $5^{1 / 3 / 16}$ | $271 / 4$ |
| 1 | $1-11 / 4-1-2$ | $1-11 / 2$ | 53 | 31 | 31 | $451 / 2$ | 7 | 31 |
| 2 | $1-11 / 4-1-21 / 2$ | 1-2 | 53 | 31 | 35 | $451 / 2$ | 7 | 31 |
| 3 | 1-2-1-21/2 | 1-2 | 53 | 31 | 39 | $451 / 2$ | 7 | 31 |
| 4 | 1-2-1-3 | 1-21/2 | 68 | 35 | 39 | $501 / 2$ | 9 | 323/4 |
| 5 | $1-2-1-3$ | $1-21 / 2$ | 68 | 35 | 45 | $501 / 2$ | 9 | 323/4 |
| 6 | $1-2-1-3$ | $1-21 / 2$ | 68 | 35 | 51 | $501 / 2$ | 9 | 323/4 |
|  |  |  |  |  |  |  |  |  |

[^25]
## COTTAGE WATER BOILERS.



1631-C.
Showing Parts and Method of Shaking Numbers 00, 0, 1, 2 and 3.



1632-C.
Method of Shaking
Numbers 4, 5 and 6.


163t-C.
Smoke Bonnet.
Shipped with all Cottage Boilers.

## MERCER BOILERS.

FOR WATER OR STEAM WARMING. HARD OR SOFT COAL.


1640-C.
Mercer Steam Boiler.


1641-C.
Mercer Water Boiler.

NO. I MERCER BOILER.
Code for Steam .. $\qquad$ Polarstrom Polaruhr Polary Polarzone Polastre Code for Water ...... Numbers................ Number of sections..
*Price for Steam ....
*Price for Water...... Shipping weight, lbs

| rstro | Polaruhr | Polary | Polarzone | Polastre |
| :---: | :---: | :---: | :---: | :---: |
| Polcaba | Polcabamos | Polcamos | Polcando | Polcaron |
| 518 | 618 | 718 | 818 | 918 |
| 5 | 6 | 7 | 8 | 9 |
| \$180.00 | 213.00 | 245.00 | 278.00 | 310.00 |
| 172.00 | 205.00 | 237.00 | 270.00 | 302.00 |
| 2101 | 2433 | 2772 | 3104 | 3441 |


| Polatouche <br> Pollergast <br> $\mathbf{1 0 1 8}$ | Polatucha <br> Poldway | Polbildung <br> Poleadisas <br> 118 |
| :---: | :---: | :---: |
| $\mathbf{1 0}$ | 118 | 12 |
| 343.00 | 375.00 | 408.00 |
| 335.00 | 367.00 | 400.00 |
| 3787 | 4148 | 4481 |

*The above prices are for Boilers complete with trimmings, together with fire tools, which include flue brush with handle and shovel. Pipe and fittings for connecting trimmings on steam Boilers not included.

Dimensions.

| Numbers. | Number of Sections. | ${ }^{* *}$ Square Feet Steam Radiation Supplied. | **Square Feet Water Radiation Supplied. | Size of Grate, Inches. | Square Feet of Grate Surface. | Square Feet Surface. | Total <br> Length <br> Inches. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 518 | 5 | 425 | 700 | 18x18 | 21/4 | 60 | 39 |
| 618 | 6 | 550 | 900 | $18 \times 24$ | 3 | 72 | 45 |
| 718 | 7 | 675 | 1100 | 18x30 | 33/4 | 84 | 51 |
| 818 | 8 | 800 | 1325 | 18x36 | $41 / 2$ | 96 | 57 |
| 918 | 9 | 950 | 1550 | 18x42 | $51 / 4$ | 108 | 63 |
| 1018 | 10 | 1100 | 1800 | 18x48 | 6 | 120 | 69 |
| 1118 | 11 | 1225 | 2025 | 18x54 | $63 / 4$ | 132 | 75 |
| 1218 | 12 | 1350 | 2250 | 18x60 | $71 / 2$ | 144 | 81 |

Total height, 69 inches. Total width, 45 inches. Height of water line, 51 inches. Diameter of Smoke Pipe, 9 inches. Distance from Floor to center of Smoke Pipe, $353 / 4$ inches.

Mercer Boilers can be furnished with Grates 6,12 and 18 inches shorter than Grate measurements given, at above prices. Grates can be furnished 6 inches longer than above at additional prices.

## REGULAR TAPPINGS-SUPPLY DRUMS.

Outside Diameter, 6 inches. Each end tapped
for $2 \frac{1}{2}$-inch pipe.

## REGULAR TAPPINGS-RETURN DRUMS.

Outside Diameter, 4 inches.

Tapped for $11 / 2$-inch Lock-Nut Nipples.
Each end tapped for $21 / 2$-inch pipe.
All Return Drums have one 2 -inch hole on top near end, and one 2 -inch hole on under side near opposite end.

## Parties wishing Drums tapped differently from above, specify on order.

** For Boiler Ratings see page 450.

## MERCER BOILERS.

FOR WATER OR STEAM WARMING. HARD OR SOFT COAL.

NO. 2 MERCER BOILER.

| Code for | Polearum | Poledrino | Poleggio | Polemannie | Polemarch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code for Water | Polemy | Polenor | Polentarum | Polergal | Polewards |
| Numbers | 727 | 827 | 927 | 1027 | 1127 |
| Number of section | 7 | 8 | 9 | 10 | 11 |
| *Price for Steam. | \$344.00 | 396.00 | 448.00 | 500.00 | 552.00 |
| *Price for Water. | 334.00 | 386.00 | 438.00 | 490.00 | $5+2.00$ |
| Shipping weight, lb | 3994 | 4478 | 4941 | 5420 | 5920 |
| Code for Steam | Polemarque | Polemical | Polemicist | Polemonium | Polemusa |
| Code for Wate | Polewig | Polhacra | Polhinha | Polhodie | Poliacanto |
| Numbers.. | 1227 | 1327 | 1427 | 1527 | 1627 |
| Number of section | 12 | 13 | 14 | 15 | 16 |
| *Price for Steam. | \$604.00 | 656.00 | 708.00 | 760.00 | 812.00 |
| *Price for Water. | 594.00 | 646.00 | 698.00 | 750.00 | 802.00 |
| Shipping weight, lbs | 6370 | 6883 | 7360 | .... | ...... |

*The above prices are for Boilers complete with trimmings, together with fire tools, which include flue brush with handle and shovel. Pipe and fittings for connecting trimmings on Steam Boilers not included.

Dimensions.

| Numbers. | Number of Sections. | **Square Feet Steam Radiation Supplied. | **Square Feet. Water Radiation Supplied. | Size of Grate, Inches. | Square Feet of Grate Surface. | Square Feet of Fire Surface. | Total Length, Inches. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 727 | 7 | 1100 | 1825 | $27 \times 30$ | 55/8 | 126 | 52 |
| 827 | 8 | 1275 | 2100 | $27 \times 36$ | 63/4 | 144 | 58 |
| 927 | 9 | 1475 | 2450 | $27 \times 42$ | $77 / 8$ | 162 | 64 |
| 1027 | 10 | 1675 | 2775 | $27 \times 48$ | 9 | 180 | 70 |
| 1127 | 11 | 1950 | 3225 | $27 \times 54$ | 101/8 | 198 | 76 |
| 1227 | 12 | 2250 | 3700 | $27 \times 60$ | 111/4 | 216 | 82 |
| 1327 | 13 | 2500 | 4125 | $27 \times 66$ | $123 / 8$ | 234 | 88 |
| 1427 | 14 | 2750 | 4550 | $27 \times 72$ | $131 / 2$ | 252 | 94 |
| 1527 | 15 | 3000 | 4950 | $27 \times 78$ | 145/8 | 270 | 100 |
| 1627 | 16 | 3250 | 5375 | $27 \times 84$ | $153 / 4$ | 288 | 106 |

Total height, 80 inches. Total width, 60 inches. Height of water line, 57 inches. Diameter of Smoke Pipe, 12 inches. Distance from floor to center of Smoke Pipe, $381 / 4$ inches.

Mercer Boilers can be furnished with Grates 6, 12 and 18 inches shorter than Grate measurements given, at above prices. Grates can be furnished 6 inches longer than above at additional prices.

## REGULAR TAPPINGS-SUPPLY DRUMS.

Outside diameter, 8 inches. Each end tapped for $21 / 2$-inch pipe.

| No. of Holes for Lock-Nut Nipples. | Size and Number of Holes on Top. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 11/2-Inch. | 2-Inch. | 3 -Inch. | 4-Inch. |
| 7 | 1 |  | 2 | 1 |
| 8 | 1 | .......... | 2 | 1 |
| 9 | 1 |  | 2 | 1 |
| 10 | 1 |  |  | 3 |
| 11 |  | 1 | ........ | 3 |
| 12 |  | 1 | ........... | 3 |
| 13 |  | 1 | ........... | 3 |
| 14 |  | 1 |  | 3 |
| 15 |  | 1 |  | 3 |
| 16 | ............ | 1 | ..... ..... | 3 |

## REGULAR TAPPINGS-RETURN DRUMS.

Outside diameter, 6 inches. Tapped for $11 / 2$-inch Lock-Nut Nipples. Front end tapped for $21 / 2$-inch pipe. Rear end tapped for 4 -inch pipe.

All Return Drums have one 2 -inch hole on top near end and one 2 -inch hole on under side near opposite end.

[^26]
# MERCER BOILERS. <br> FOR WATER OR STEAM WARMING. HARD OR SOFT COAL. 

No. 3 MERCER BOILER.

| Code for Ste | Poliandria | Poliandro | Poliantere | Polianthes | Poliarcas |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code for Water | Police | Policeman | Policheto | Polidor | Poliebat |
| Numbers | 836 | 936 | 1036 | 1136 | 1236 |
| Number of sections | 8 | 9 | 10 | 11 | 12 |
| *Price for Stean | \$534.00 | 597.00 | 660.00 | 723.00 | 786.00 |
| *Price for Wate | 522.00 | 585.00 | 648.00 | 711.00 | $7 \overline{7} 4.00$ |
| Shipping weight, lbs. | 6166 | 6816 | 7482 | 8129 | 8803 |
| Code for Steam |  | Poliarchia | Poliarque | Policant | Policarpo |
| Code for Water |  | Poliedar | Poliemia | Poliendos | Polierbank |
| Numbers |  | 1336 | 1436 | 1536 | 1636 |
| Number of section |  | 13 | 14 | 15 | 16 |
| *Price for Steam. |  | \$849.00 | 912.00 | 975.00 | 1038.00 |
| * Price for Water |  | 837.00 | 900.00 | 963.00 | 1026.00 |
| Shipping weight, lbs... |  | 9471 | 10222 | 10837 | 11581 |

*The above prices are for Boilers complete with trimmings, together with fire tools, including flue brush with handle and shovel. Pipe and fittings for connecting trimmings on Steam Boilers not included.

Dimensions.

| Numbers. | Number of Sections. | **Square Feet Steam Radiation Supplied. | **Square Feet Water Radiation Supplied. | Size of Grate, Inches. | Square Feet of Grate Surface. | Square Feet of Fire Surface. | Total Length, Inches. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 836 | 8 | 1825 | 3000 | $36 \times 36$ | 9 | 195 | 58 |
| 936 | 9 | 2175 | 3575 | $36 \times 42$ | $101 / 2$ | 225 | 64 |
| 1036 | 10 | 2500 | 4125 | $36 \times 48$ | 12 | 255 | 70 |
| 1136 | 11 | 2850 | 4700 | $36 \times 54$ | $13 \mathrm{I} / 2$ | 285 | 76 |
| 1236 | 12 | 3200 | 5275 | $36 \times 60$ | 15 | 315 | 82 |
| 1336 | 13 | 3500 | 5775 | $36 \times 66$ | $16 \mathrm{t} / 2$ | 345 | 88 |
| 1436 | 14 | 3900 | 6450 | $36 \times 72$ | 18 | 375 | 94 |
| 1536 | 15 | 4300 | 7100 | $36 \times 78$ | $191 / 2$ | 405 | 100 |
| 1636 | 16 | 4700 | 7775 | $36 \times 84$ | 21 | 435 | 106 |

Total height, 83 inches. Total width, 70 inches. Height of water line, 59 inches. Smoke Pipe (oval), $15 \frac{1}{4} \times 121 / 8$ inches, equals 14 -inch round pipe.

Distance from floor to center of Smoke Pipe, $411 / 8$ inches.

## REGULAR TAPPINGS-SUPPLY DRUMS.

Outside diameter, 10 inches. Each end tapped for $21 / 2$-inch pipe.

| No. of Holes for Lock-Nut Nipples. | Size and Number of Holes on Top. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2-Inch. | 4-Inch. | 5-Inch. | 6-Inch. |
| 8 | 1 | 3 | ...... | ...... |
| 9 | 1 | 3 | .... | ...... |
| 10 | 1 | 2 | 1 | $\ldots .$. |
| 11 | 1 | 2 | 1 | $\ldots .$. |
| 12 | 1 | 2 | . | 1 |
| 13 | 1 | ...... | 2 | 1 |
| 14 | 1 | ...... | 2 | 1 |
| 15 | 1 | $\ldots .$. | ...... | 3 |
| 16 | 1 | ...... | ...... | 3 |

## REGULAR TAPPINGS-RETURN DRUMS.

Outside diameter, 8 inches. Tapped for 2 -inch Lock-Nut Nipples. Tapped $21 / 2$-inch front end.

8 Hole Drum tapped 4 -inch rear end.
9, 10, 11 Hole Drum tapped 5 -inch rear end.
$12,13,14,15,16$ Hole Drum tapped 6 -inch rear end.

All Return Drums have one 2 -inch hole on top near end and one 2 -inch hole on under side near opposite end.

Parties wishing Drums tapped differently from above, specify on order.

## **BOILER RATINGS.

Steam Boiler Ratings are based on maintaining two pounds pressure at the boiler.
Water Boiler Ratings are based on the water being maintained at a temperature of 180 degrees at the boiler.

Sufficient surface must be proportioned to easily raise and maintain a temperature of 70 degrees.
These Ratings are for Direct Radiation.
In estimating the size of the Boiler required, all piping (Mains and Risers, Flows and Returns) should be figured as radiating surface in addition to the Cast Iron Direct Radiators. Usual allowances must be made for the use of Pipe Coils, Direct-Indirect and Indirect Radiation.

## In Orders and Specifications give Plate Numbers and Sizes.

## MERCER BOILERS.



1642-C.
Sectional View. Grate Full Size.


1644-C.
Ash Pit Walls. Grate Reduced Twelve Inches.

1643.C.

Fire Back Section in Position. Grate Reduced Twelve Inches.


1646-C.
Extreme Back Section in position, showing Cleaning Plugs. Plugs removed only when Flues are cleaned.

1645-C.
Section of Grate.
Write for Special Catalogue of Water and Steam Boilers.
In Orders and Specifications give Plate Numbers and Sizes.

## ROYAL UNION RADIATORS. <br> steam or water.



## Dimensions of Section:

Total width at Floor, $85 / 8$ inches. Width of Section, $85 / 8$
Length of Section, 3


1651-C.

RADIATING SURFACE (Square Feet).

|  |  | Code. |  | Code. |  | Code. |  | Code. | 先 | Code. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 6 | Polierfiz | 12 | Polion | 10 | Polit | 8 | Pollac | 6 | Pollinxit | 4 |
| 3 | 9 | Polierroth | 18 | Polionem | 15 | Politea | 12 | Pollak | 9 | Polliono | 6 |
| 4 | 12 | Poliersand. | 24 | olionibus | 20 | Politeismo | 16 | Pollage. | 12 | Polliwigs. | 8 |
| 5 | 15 | Olieum | 30 | Polionis | 25 | Politesse | 20 | Pollarded | 15 | Pollocks.. | 10 |
| 6 | 18 | Polifagia | 36 | Poliopsia | 30 | Politezza | 24 | Pollastra | 18 | Pollonand | 12 |
| 7 | 21 | Polifilia. | 42 | Poliorum | 35 | Politicao | 28 | Pollazon | 21 | Pollonass | 14 |
| 8 | 24 | Polifolia | 48 | Poliosome | 40 | Politicien. | 32 | Pollday.. | 24 | Pollucao | 16 |
| 9 | 27 | Poliforo. | 54 | Poliottro | 45 | Politicly ... | 36 | Pollebamus. | 27 | Pollucebis | 18 |
| 10 | 30 | Poligalina | 60 | Polipario... | 50 | Politicon | 40 | Pollebro | 30 | Pollucenda | 20 |
| 11 | 33 | Poligamia | 66 | Polipastos | 55 | Politionis | 44 | Pollegada..... | 33 | Pollucere | 22 |
| 12 | 36 | Poligar. | 72 | Polipetalo | 60 | Politiorum | 48 | Pollenger. | 36 | Pollucta. | 24 |
| 13 | 39 | Poliglotos | 78 | Polipionia | 65 | Politipia .. | 52 | Pollenie | 39 | Polluebare | 26 |
| 14 | 42 | Poligonat | 84 | Polipite | 70 | Politique .. | 56 | Pollepell | 42 | Polluerem | 28 |
| 15 | 45 | Poligono | 90 | Polipo | 75 | Politize | 60 | Pollezn | 45 | Polluximus | 30 |
| 16 | 48 | Poligrafo | 96 | Polipodio | 80 | Polito | 64 | Pollicar | 48 | Póllyxene | 32 |
| 17 | 51 | Poligrammo | 102 | Polipogono | 85 | olitricio | 68 | Pollicat | 51 | Polmoew | 34 |
| 18 | 54 | Polilepa. | 108 | Polipremn | 90 | Politrofia | 72 | Polliceba | 54 | Polm | 36 |
| 19 | 57 | Polilha.. | 114 | Poliprione | 95 | Polittongo | 76 | Polliceor | 57 | olnacht | 38 |
| 20 | 60 | olilinf | 120 | Polisander | 100 | Polituram | 80 | Pollichie | 60 | Polnisch | 40 |
| 21 | 63 | Polilogi | 126 | Polisarcia. | 105 | Poliurica | 84 | Pollicipes | 63 | Polochio | 42 |
| 22 | 66 | Polimes | 132 | Poliscopio.... | 110 | Poliuto | 88 | Pollictore. | 66 | Polochre | 44 |
| 23 | 69 | Polimento. | 138 | Polishable ... | 115 | Polivalvo.. | 92 | Pollies. | 69 | Polonese | 46 |
| 24 | 72 | Poliminum | 144 | Polishment... | 120 | Polizeau ., | 96 | Pollinar... | 72 | Polorum | 48 |
| 25 | 75 | Polimisso | 150 | Polisilabo..... | 125 | Poliziano .- | 100 | Pollinatos... | 75 | Polpa... | 50 |
| 26 | 78 | Polimorfa | 156 | Polispasto.... | 130 | Polizonite | 104 | Pollinctor..... | 78 | Polpacao | 52 |
| 27 | 81 | Polinnia ... | 162 | Polissage . | 135 | Polizzina .. | 108 | Pollineux | 81 | Polpetta ... | 54 |
| 28 | 84 | Polinomio.... | 168 | Polissais.. | 140 | Polkeurs... | 112 | Pollinges... | 84 | Polpodes... | 56 |
| 29 | 87 | Poliodonte... | 174 | Polisseurs | 145 | Polkiez ..... | 116 | Pollinibus ... | 87 | Polpudo ... | 58 |
| 30 | 90 | Poliommato | 180 | Polostico . | 150 | Polkons. | 120 | Pollinique ... | 90 | Polque.... | 60 |
| Approximate weight per square foot, lbs. |  |  | 7 |  | 7 |  | 7 |  | 7 |  | 7 |
| List per square foot..... |  |  | \$0.41 |  | . 42 |  | 46 |  | . 50 | ..... | 58 |
|  |  |  |  |  |  |  |  |  |  |  |  |

Distance from Floor to Center Regular Tapping (all heights and sizes) $45 / 8$ inches.
Water Radiators tapped 2-inch Top and Bottom one end, 2 -inch opposite end. Steam Radiators tapped 2 -inch Bottom, each end. The Return End Section tapped for Air Valves, $1 / 8$-inch, either Steam or Water.
*Add $11 / 2$ inches to total length for Radiator Bushings.
See pages 458 and 459 for Regular Tappings.

## IMPERIAL UNION RADIATORS.

STEAM OR WATER.


## Dimensions of Section:

Total Width at Floor, 9 inches. Width of Section,
Length per Section, 31/4"

1654-C.


1650 ( ${ }^{\prime}$.
RADIATING SURFACE (Square Feet).

|  |  | Code. |  | Code. |  | Code. |  | Code. |  | Code. | $\begin{aligned} & \text { 关 } \\ & 0.0 \\ & =0 \\ & =0 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | $61 / 2$ | Polschuss.... | 16 | Polviglio | 13 | Polydesmes.. | 11 | Polylogue.. | 9 | Polyptote.... | 7 |
| 3 | $93 / 4$ | Polshamer ... | 24 | Polvilhar | 19 1/2 | Polydiclie..... | $161 / 2$ | Polylogy ...... | $131 / 2$ | Polypum..... | $10^{1 / 2}$ |
| 4 | 13 | Polsmeter.. | 32 | Polviscolo | 26 | Polydipsie ... | 22 | Polymath ..... | 18 | Polyscias... | 14 |
| 5 | $16^{1 / 4}$ | Polsslag | 40 | Polvora | $321 / 2$ | Polyedre...... | $271 / 2$ | Polymedon... | $221 / 2$ | Polyscope... | $171 / 2$ |
| 6 | $191 / 2$ | Polsstok | 48 | Polvoreado .. | 39 | Polyedrous... | 33 | Polymestor... | 27 | Polyselmis.. | 21 |
| 7 | $223 / 4$ | Polster... | 56 | Polvorento... | $451 / 2$ | Polyergie.. ... | $381 / 2$ | Polymetre.... | $311 / 2$ | Polysemi .... | $241 / 2$ |
| 8 | 26 | Poltern | 64 | Polvorinho... | 52 | Polyfoil ....... | 44 | Polymiaire... | 36 | Polysemos.. | 28 |
| 9 | 29 1/4 | Polterton | 72 | Polvorista.. | $581 / 2$ | Polygalas..... | $491 / 2$ | Polymitos.... | $401 / 2$ | Polysome.... | $311 / 2$ |
| 10 | $321 / 2$ | Poltra | 80 | Polvoriza ..... | 65 | Polygalon ... | 55 | Polymnite.... | 45 | Polyspat..... | 35 |
| 11 | $353 / 4$ | Poltrendo | 88 | Polvorosas... | $711 / 2$ | Polygamiam | $601 / 2$ | Polynemus... | $491 / 2$ | Polyspile... | $381 / 2$ |
| 12 | 39 | Poltrimmo | 96 | Polyachyre .. | 78 | Polygarchy... | 66 | Polynome.... | 54 | Polystemon | 42 |
| 13 | $421 / 4$ | Poltrisco | 104 | Polyadenes .. | $841 / 2$ | Polygenist.... | $711 / 2$ | Polynus........ | $581 / 2$ | Polystyle... | 45 1/2 |
| 14 | $451 / 2$ | Poltrivamo | 112 | Polyaenus.... | 91 | Polygiton..... | 77 | Polypage...... | 63 | Polyteles..... | 49 |
| 15 | 483/4 | Poltrona | 120 | Polyandres... | $971 / 2$ | Polyglotta.... | $821 / 2$ | Polypary...... | $671 / 2$ | Polytimus ... | $521 / 2$ |
| 16 | 52 | Poltroon | 128 | Polyanthea... | 104 | Polygnathe... | 88 | Polypedies... | 72 | Polytmes.... | 56 |
| 17 | $55^{1 / 4}$ | Polubris. | 136 | Polyaratus ... | $110^{1 / 2}$ | Polygnoti..... | $931 / 2$ | Polypeux..... | $761 / 2$ | Polytone..... | $591 / 2$ |
| 18 | $581 / 2$ | Poluli. | 144 | Polyarchie ... | 117 | Polygomphe. | 99 | Polyphagos.. | 81 | Polytrope... | 63 |
| 19 | $613 / 4$ | Polulo | 152 | Polyargite. | 1231/2 | Polygonal..... | $1041 / 2$ | Polyphemo... | $851 / 2$ | Polyxena..... | $66^{1 / 2}$ |
| 20 | 65 | Polulum | 160 | Polyatomic... | 130 | Polygonium.. | 110 | Polyphides... | 90 | Polyxo....... | 70 |
| 21 | $681 / 4$ | Polusacco | 168 | Polybaphie... | $1361 / 2$ | Polygonope.. | $1151 / 2$ | Polyphony... | $941 / 2$ | Pomacanto | 73 1/2 |
| 22 | $711 / 2$ | Polusca... | 176 | Polybasic ..... | 143 | Polygram..... | 121 | Polyphrade.. | 99 | Pomace ...... | 77 |
| 23 | 743/4 | Polvareda | 184 | Polybetes ..... | $1491 / 2$ | Polygynia ... | $1261 / 2$ | Polypier ...... | $1031 / 2$ | Pomaceae... | $801 / 2$ |
| 24 | 78 | Polverando | 192 | Polybidas..... | 156 | Polyhalite..... | 132 | Polypifera ... | 108 | Pomachile.. | 84 |
| 25 | $811 / 4$ | Polverassi. | 200 | Polybis......... | $1621 / 2$ | Polyhistor.... | $1371 / 2$ | Polypifgas.... | 1121/2 | Pomacies ... | $871 / 2$ |
| 26 | $84^{1 / 2}$ | Polverato. | 208 | Polyboles ..... | 169 | Polyides ...... | 143 | Polypodium. | 117 | Pomadasys | 91 |
| 27 | $873 / 4$ | Polverava | 216 | Polybore...... | $1751 / 2$ | Polykrates ... | $1481 / 2$ | Polyporum... | $1211 / 2$ | Pomadiger.. | $941 / 2$ |
| 28 | 91 $9+1$ | Polverini | 224 | Polybotum... | 182 | Polylaus.. | 154 | Polyposo...... | 126 | Pomagem... | 98 |
| 29 30 | $941 / 4$ | Polvificar. | 232 | Polydamna... | $1881 / 2$ | Polylepis.... | $1591 / 2$ | Polypous...... | $1301 / 2$ | Pomarins.... | $1011 / 2$ |
| 30 | $971 / 2$ | Polvifique. | 240 | Polydectes.... | 195 | Polylobe ... | 165 | Polyprion ... | 135 | Pomastome | 105 |
| Approximate weight per square foot, lbs. |  |  | $61 / 2$ |  | 61/2 |  | $61 / 2$ |  | $61 / 2$ |  | $61 / 2$ |
| List per square foot.... |  |  | \$0.41 |  | . 42 |  | 46 |  | . 50 |  | . 57 |

[^27]
## PRINCESS UNION RADIATORS.

STEAM OR WATER.


These Radiators are the same size and price as Imperial Union Radiators. See page 453.

## DIADEM RADIATORS.

STEAM OR WATER.

## Dimensions of Section :

Total width at floor......51/4 inches.
Width of section......... $5^{1 / 4}$ "
Length of section......... 3 "

16.9.9. 1.

These Radiators are the same size and prize as Coronet Radiators. See page 455 .

See pages 4.8 and 459 for Regular Tappings.

## CORONET RADIATORS.

STEAM OR WATER.


1660-C.

## Dimensions of Section :

Total width at Floor, $5^{1 / 1 / 4}$ inches.
Width of Section, $\quad 51 / 4$
Length per Section, 3


1661-C.

RADIATING SURFACE (Square Feet).

|  |  | Code. |  | Code. |  | Code. |  | Code. |  | Code. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 6 | Pomations.... | 9 | Pompabile.... | 7 | Pompion | 6 | Ponderamos | 5 | Pongut.. | 4 |
| 3 | 9 | Pomatomo... | 131/2 | Pompabunt.. | 101/2 | Pompire | 9 | Ponderance.. | $71 / 2$ | Poniamo. | 6 |
| 4 | 12 | Pomatumed.. | 18 | Pompais ...... | 14 | Pompiscus... | 12 | Ponderaron.. | 10 | Poniard.. | 8 |
| 5 | 15 | Pomax | $221 / 2$ | Pompamus .. | $171 / 2$ | Pomplamo.... | 15 | Ponderato ... | $12^{1 / 2}$ | Ponibility . | 10 |
| 6 | 18 | Pombinha ... | 27 | Pomparetis .. | 21 | Pompmaker. | 18 | Ponderava .... | 15 | Ponidore | 12 |
| 7 | 21 | Pomella .... | $311 / 2$ | Pomparoso .. | $241 / 2$ | Pompoleon... | 21 | Ponderavel .. | $171 / 2$ | Ponientada | 14 |
| 8 | 24 | Pomellato ... | 36 | Pompasses... | 28 | Pomponios... | 24 | Ponderer...... | 20 | Ponnaca. | 16 |
| 9 | 27 | Pometiam ... | $401 / 2$ | Pompaticos.. | $311 / 2$ | Pomponium. | 27 | Pondereux.... | $221 / 2$ | Ponskom | 18 |
| 10 | 30 | Pometinis | 45 | Pompavisti .. | 35 | Pompons ..... | 30 | Ponderibus... | 25 | Ponslepel.... | 20 |
| 11 | 33 | Pometios | $491 / 2$ | Pompboor ... | $381 / 2$ | Pomposas..... | 33 | Ponderoso .... | $271 / 2$ | Ponslied... | 22 |
| 12 | 36 | Pomfolige ... | 54 | Pompbouten | 42 | Pomposita.... | 36 | Pondeuses .... | 30 | Ponsschaal... | 24 |
| 13 | 39 | Pomifero ..... | $581 / 2$ | Pompdaal ... | $45.1 / 2$ | Pomposo...... | 39 | Pondgeld ...... | $321 / 2$ | Pontaggio ... | 26 |
| 14 | 42 | Pomiforme .. | 63 | Pompeabas .. | 49 | Pomput..... | 42 | Pondhuis...... | 35 | Pontage.. | 28 |
| 15 | 45 | Pomiliones | $671 / 2$ | Pompeggia .. | $521 / 2$ | Pompslag..... | 45 | Pondicula ..... | $371 / 2$ | Pontalets | 30 |
| 16 | 48 | Pommadiez.. | 72 | Pompejani.... | 56 | Pompstang .. | 48 | Pondpapier.. | 40 | Pontarios | 32 |
| 17 | 51 | Pommaille.. | $761 / 2$ | Pompejanos. | $591 / 2$ | Pompsteel .... | 51 | Pondspeer .... | $42^{1 / 2}$ | Ponteado | 34 |
| 18 | 54 | Pommeau | 81 | Pomper........ | 63 | Pompstok..... | 54 | Ponebamus .. | 45 | Pontearan | 36 |
| 19 | 57 | Pommelion | $851 / 2$ | Pomperaio... | $661 / 2$ | Pomptina..... | 57 | Ponebat...... | $471 / 2$ | Pontease | 38 |
| 20 | 60 | Pomı | 90 | Pomperont... | 70 | Pomptinos... | 60 | Ponederas. | 50 | Pont | 40 |
| 21 | 63 | Pommetier | $941 / 2$ | Pompeux ..... | $731 / 2$ | Pomptinum.. | 63 | Ponedera... | $521 / 2$ | Ponteler | 42 |
| 22 | 66 | Pommiers | 99 | Pompgast ... | 77 | Pompuster.... | 66 | Ponederos | 55 | Pontgast. | 44 |
| 23 | 69 | Pomona | 1031/2 | Pompgoot ... | $801 / 2$ | Pomunus.. | 69 | Ponencias | $571 / 2$ | Pontgeld... | 46 |
| 24 | 72 | Pomonale | 108 | Pomphaft..... | 84 | Pomusculi ... | 72 | Ponendos.. | 60 | Pontieani | 48 |
| 25 | 75 | Pomonalis | $1121 / 2$ | Pomphamer. | $871 / 2$ | Ponamus | 75 | Ponente. | $621 / 2$ | Pontibu | 50 |
| 26 | 78 | Pomones | 117 | Pompicos..... | 91 | Poncella | 78 | Ponentello.... | 65 | Ponticello. | 52 |
| 27 | 81 | Pomosos... | 121 1/2 | Pompicum.... | $941 / 2$ | Ponceux... | 81 | Ponentina. | $671 / 2$ | Pontiche.. | 54 |
| 28 | 84 | Pomosum. | 126 | Pompilia ..... | 98 | Ponchadas... | $8 \pm$ | Ponevano... | 70 | Ponticulos | 56 |
| 29 | 87 | Pomoyer... | $1301 / 2$ | Pompilites.... | 101 1/2 | Pandaison... | 87 | Pongamos.... | $721 / 2$ | Pontifex | 58 |
| 30 | 90 | Pompobar | 135 | Pompilo .. | 105 | Ponderador. | 90 | Pongolam. | 75 | Pontifice | 60 |
| Approximate weight per square foot, lbs. |  |  | 7 |  | 7 |  | 7 |  | 7 |  | 7 |
| List per square foot.... |  |  | \$0.41 |  | 42 |  | 46 |  | . 50 |  | 57 |

Water Radiators tapped 2 -inch Top and Bottom one end, 2 -inch opposite end. Steam Radiator tapped 2 -inch Bottom, each end. The Return Ends Section tapped for Air Valves, $1 / 8$-inch Steam or Water.

* Add $11 / 2$ inches to total length for Radiator Bushings.

See pages 458 and 459 for Regular Tappings.
In Orders and Specifications give Plate Numbers and Number of Sections.

## SCEPTER RADIATORS.

STEAM ONLY



Dimensions of Section:
Total width at floor.... 7 inches.
Width of section........ 7
Length per section.....23/8 "


1663-('.

RADIATING SURFACE (Square Feet).

|  |  | Code. |  | Code. |  | Code. |  | Code. |  | Code. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 43/4 | Pontifigue.... | $91 / 2$ | Popeshys .... | 8 | Poppejnik.... | 6 | Porbeagle.... | $42 / 3$ | Porgebaris... | $31 / 3$ |
| 3 | $71 / 8$ | Pontilha ...... | 141/4 | Popinabor ... | 12 | Popellina..... | 9 | Porcaco...... |  | Porgendo..... |  |
| 4 | $91 / 2$ | Pontilibus.... | 19 | Popinale...... | 16 | Poppengek... | 12 | Porcalhao.... | $91 / 3$ | Porgesse...... | $62 / 3$ |
| 5 | 117/8 | Pontils.. | 233/4 | Popinette.... | 20 | Popphemd... | 15 | Porcallon..... | 112/3 | Porgevate.... | $81 / 3$ |
| 6 | 141/4 | Pontofilo... | $281 / 2$ | Popingays... | 24 | Poppenkast.. | 18 | Porcariza. | 14 | Porgimur .... | 10 |
| 7 | 165/8 | Pontones...... | $331 / 4$ | Popinjay...... | 28 | Poppenspel.. | 21 | Porcastro. | 161/3 | Porgitore..... | $11^{2 / 3}$ |
| 8 | 19 | Pontonibus.. | 38 | Popinone..... | 32 | Popperig...... | 24 | Porcated.. | 182/3 | Porgunt....... | $131 / 3$ |
| 9 | $213 / 8$ | Pontoons..... | $423 / 4$ | Popish........ | 36 | Poppese....... | 27 | Porcebitis.... | 21 | Porillon ....... | 15 |
| 10 | $233 / 4$ | Pontuali .. | $471 / 2$ | Poplared...... | 40 | Popples ..... | 30 | Porcebunt.... | $23^{1 / 3}$ | Porismato.... | $16^{2} / 3$ |
| 11 | $261 / 8$ | Poodles........ | $521 / 4$ | Popletem..... | 44 | Poppuzza .... | 33 | Porcelana.... | $25^{2 / 3}$ | Porisme....... | $18^{1 / 3}$ |
| 12 | $281 / 2$ | Poolkat....... | 57 | Popletibus ... | 48 | Poppysme.... | 36 | Porcellion.... | 28 | Porkers.. | 20 |
| 13 | $307 / 8$ | Poorhouse ... | $613 / 4$ | Poplicolis.... | 52 | Poppyzon.... | 39 | Porcendos | $301 / 3$ | Porkling. | $21^{2 / 3}$ |
| 14 | $331 / 4$ | Poorliness ... | $661 / 2$ | Poplicum..... | 56 | Populabar.... | 42 | Porcetra | $322 / 3$ | Pormeno | $23^{1 / 3}$ |
| 15 | $355 / 8$ | Poorly......... | $711 / 4$ | Popliteal...... | 60 | Populacas.... | 45 | Porchetta | 35 | Porocele. | 25 |
| 16 | 38 | Popabais...... | 76 | Popliteo.. | 64 | Populaire..... | 48 | Porciano | $371 / 3$ | Poroderme... | $26^{2} / 3$ |
| 17 | $403 / 8$ | Popadora..... | 803/4 | Poploe........ | 68 | Popular.... . | 51 | Porcile ... | $392 / 3$ | Porodozio.... | $28^{1 / 3}$ |
| 18 | 423/4 | Popamiento. | 85 1/2 | Poplorum..... | 72 | Populated. | 54 | Porcilia.. | 42 | Porofillo | 30 |
| 19 | $451 / 8$ | Popamos...... | $90^{1 / 4}$ | Popolando... | 76 | Populator..... | 57 | Porcone.. | $441 / 3$ | Porofora...... | $312 / 3$ |
| 20 | $471 / 2$ | Popanorum.. | 95 | Popolata ..... | 80 | Popularit..... | 60 | Porculator ... | $46^{2 / 3}$ | Poronfalo | $331 / 3$ |
| 21 | 497/8 | Popanum.... | 993/4 | Popolazzo.... | 84 | Populeone ... | 63 | Porcunos. | 49 | Poronia | 35 |
| 22 | $521 / 4$ | Popar......... | $1041 / 2$ | Popolino...... | 88 | Populeux..... | 66 | Porcupine.... | $511 / 3$ | Pororaca | $36^{2 / 3}$ |
| 23 | $545 / 8$ | Popares...... | $1091 / 4$ | Popolosa...... | 92 | Populina ...... | 69 | Pordenone... | $532 / 3$ | Porosas. | $38^{1 / 3}$ |
| 24 | 57 | Poparemos... | 114 | Popone........ | 96 | Populneos ... | 72 | Poreblind.. | 56 | Poroselene | 40 |
| 25 | 593/8 | Poparon ...... | 1183/4 | Poponessa ... | 100 | Populneum .. | 75 | Poreusis. | $581 / 3$ | Porotelio | $41^{2 / 3}$ |
| 26 | $613 / 4$ | Popedon...... | $1231 / 2$ | Poponide..... | 104 | Populo ....... | 78 | Poreux | 602/3 | Porothele | $431 / 3$ |
| 27 | $641 / 3$ | Popehood.... | 1281/4 | Poppando.... | 108 | Populosite ... | 81 | Porfialais | 63 | Porously. .... | 45 |
| 28 | $661 / 2$ | Popeline...... | 133 | Popparono... | 112 | Poquettes .... | 84 | Porfiar. | $65^{1 / 3}$ | Porpague ..... | $46^{2} / 3$ |
| 29 | 687/8 | Popellos ...... | 1373/4 | Poppatola.... | 116 | Poquitos ...... | 87 | Porfidos | $672 / 3$ | Porpesse ...... | 481/3 |
| 30 | 711/4 | Popery......... | $1421 / 2$ | Poppavate... | 120 | Poranes ...... | 90 | Porfio | 70 | Porpezite.. | 50 |
| App pe | oxima squa | Weight foot, lbs. | 7 |  | 7 |  | 7 |  | 7 |  | 7 |
| List | r squ | e foot.... | \$0.41 | .......... | 42 |  | . 46 | ......... | 50 |  | 58 |

Distance from Floor to Center Regular Tapping (all heights and sizes) 5 inches.
Tapped 2-inch Supply and 2-inch Return, Bottom only. The Return End Section tapped for Air Valves, $1 / 8$ - inch.

* Add $11 / 2$ inches to total length for Radiator Bushings.

See pages 458 and 459 for Regular Tappings.

## SOVEREIGN UNION.


1664.C.

Direct-Indirect Radiators. Steam or Water.

## GOLD PIN.


1665.C.

Indirect Radiators. Steam Only.


Indirect Radiators. Steam or Water.

## X-RAY WALL RADIATORS.

STEAM OR WATER.


1666-C.
8 -Foot.
8 Square Feet Per Section.


1667 -C.
5-Foot.
5 Square Feet Per Section.

Send for Special Catalogue on Style of Radiation desired.
In Orders and Specifications give Plate Numbers and Number of Sections.

## REGULAR TAPPING FOR DIRECT RADIATORS.

## STEAM.

Radiators will be Tapped for Two-Pipe work unless otherwise specified.

## TWO-PIPE WORK.



## ONE-PIPE WORK.

Radiators of 30 square feet and smaller.
Radiators larger than 30 square feet and smaller than 60 square feet. .1 inch, Right Hand Air Valves

## WATER.

Radiators of 50 square feet and smaller.................................................... inch x 1 inch, Right Hand
Radiators larger than 50 square feet $.11 / 4$ " $\times 11 / 4$
Air Valves 1/8 " at top,

If Radiators are required tapped top and bottom, same end or top and bottom, opposite ends, so specify on order.

DISTANCE FROM FLOOR TO CENTER. REGULAR TAPPINGS.

| Regular Tapping, Inches. |  | Royal Union, <br> 44, 38, 30, 24 <br> and 18 Inches High. | Imperial Union. <br> 45े, 37, 31, 25 <br> and 19 Inches High. |  |
| :---: | :---: | :---: | :---: | :---: |
| 2 1 1 1 |  | $45 / 8$ inches <br> $45 / 8$ $" 1$ <br> $45 / 8$ $"$ <br> $45 / 8$ $"$ <br> $45 / 8$ $"$ <br> $45 / 8$ $"$ |  | $45 / 8$ inches <br> $45 / 8$ " <br> $45 / 8$ $\prime$ <br> 458 " <br> 45 " <br> 458 " |
| Regular Tapping, Inches. | Princess Union, <br> 45, 37, 31, 25 and 19 Inches High. | Coronet. <br> 45, $37,31,25$ and 19 Inches High. | Diadem, 45. $37,31,25$ and 19 nches High | Scepter, <br> 44, 38, 30, 24 and 18 Inches High. |
| $\begin{aligned} & 2 \\ & 11 / 2 \\ & 11 / 4 \\ & 11 / 41 \\ & 3 / 4 \\ & 1 / 2 \end{aligned}$ |  |  |  | 5 inches <br> 5 6 <br> 5 10 <br> 5 10 <br> 5 $"$ <br> 5 $"$ |

[^28]
# APPROXIMATE DISTANCE FROM FLOOR TO CENTER OF TOP OPENINGS. 

FOR RADIATORS TAPPED TOP AND BOTTOM SAME END, OR TOP AND BOTTOM OPPOSITE END.

## PRINCESS UNION

| Height of Radia | 45 | 37 | 31 | 25 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Approximate Distance from Floor to Center of Top Openings, inches. | $42^{23 / 16}$ | $34^{3 / 4}$ | 2815/16 | $227 / 8$ |  |

## CORONET.

| Height of Radiator, inches | 45 | 37 | 31 | 25 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Approximate Distance from Floor to Center of Top Openings, inches. | 423/8 | $341 / 8$ | $281 / 8$ | 221/4 | $165 / 16$ |
| DIADEM. |  |  |  |  |  |
| Height of Radiator, inches. | 45 | 37 | 31 | 25 | 19 |
| Approximate Distance from Floor to Center of Top Openings, inches. | +21/4 | $33^{15 / 16}$ | $281 / 8$ | $221 / 4$ | $161 / 4$ |

## ROYAL UNION FOR WATER.

| Height of | 4 | 38 | 30 | 24 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Approximate Distance from Floor to Center of Top Openings, inches. | $41^{1} /{ }^{\prime} \times 6$ | $3)^{7 / 1} \times$ | $27^{15 / 16}$ | $213 / 4$ | 157/8 |

NOTICE.
If a Water Radiator is to be used for steam warming, the Air Valve must be placed at the return end of the Radiator and near the bottom. Steam Radiators cannot be used for Water Warming.

Send for Catalogue of Radiators and Boilers.


Illustrating a house system of Direct Hot Water Heating, showing flow and return pipes from the heater to the various radiators on two floors above.


Illustrating a single pipe Steam Heating System, as applied to a residence of two floors. The extreme simplicity of this system will be appreciated.


Illustrating an overhead feed system of Hot Water Heating. In this method of water heating, the flow-pipe is at once taken to a point in the attic for distribution, and all radiators fed by the fall of the water due to the cooling in the radiators.


Illustrating a two pipe system of Steam Heating, adapted only for large buildings extending over large areas or for a residence where indirect radiation is used.

The above illustrations represent, in a small way, the two systems of direct Hot Water and Steam, that are almost universally used for house heating.

## SECTION 7.

LEAD TRAPS, BENDS,

PLUMBERS' BRASS GOODS,<br>BIBBS, COCKS,<br>VALVES, WATER METERS, ETC.



Holbrook, Merrill \& Stetson, INCORPORATED.

Drawn Lead Traps and Bends, equal in appearance, outline and quality to any in the market. The trap and vent screws are secured to the lead in such a manner that a perfect and permanent joint is assured, they do not project on inside of trap, consequently a full, clear waterway is obtained.

Fuller, Compression and Ground Key Work are the best standard grade goods obtainable.

Monarch Pattern Goods are made of best quality red metal. They are heavy, unique and artistic in design; highly polished and nickel-plated.

Ludlow Gate Valves are the best that can be produced, as to design, material and workmanship.

In ordering goods from this section by telegraph it is only necessary to use the code word over, or opposite the number or name of article wanted, preceded by words from code in front of catalogue.

Example: Crosistas one Prodigally.
Translation: Ship by railroad immediately one three-inch Plain Running Lead Trap.

## DRAWN LEAD TRAPS AND BENDS.

APPEARANCE, OUTLINE AND QUALITY EQUAL TO ANY ON THE MARKET.

The Trap and Vent Screws are secured to the lead in such a manner that a perfect and permanent joint is assured-they do not project on inside of trap, consequently a full, clear waterway is obtained.

On the following pages are catalogued our regular stock sizes of Lead Traps and Bends. We carry besides those shown, many odd lengths and can furnish on short notice, in regular sizes, $11 / 4$, $11 / 2,2,3,4$ or $41 / 2$-inch traps of any length or style in either Standard, Medium or Extra Heary weight.

STOCK PACKAGES CARRIED IN STOCK READY FOR SHIPMENT.
Number of Regular Traps Plain and Vented, in a Barrel.

|  | 1/4-Inch. |  | 1 $1 / 2$-Inch. |  | 2-Inch. |  | 3-Inch. <br> Plain. | 4-Inch <br> Plain. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Plain. | Vented. | Plain. | Vented. | Plain. | Vented. |  |  |
| Full S................ | 75 | 50 | 50 | 36 | 25 | 20 | 10 | 6 |
| 3/4 S....................... | 75 | 50 | 50 | 36 | 25 | 20 | 10 | 6 |
| 1/2 S or P............... | 75 | 50 | 50 | 36 | 25 | 25 | 12 | 8 |
| Running................. | 100 | 72 | 72 | 50 | 36 | 24 | 22 | 12 |
| Extra long S........... | 24 | ...... | 24 | ...... | 15 | ...... | .... | ...... |
| Extra long P........... | 30 | ...... | 24 | ...... | 15 | ...... | ...... | ..... |
| Short Bends............ | 150 | ...... | 76 | ...... | 60 | ...... | 22 | 18 |
| Long Bends............ | 100 | ...... | 46 | ...... | 36 | ...... | 18 | 13 |

Shipping measurement per barrel, $5 / 1 / 2$ cubic feet.

Table Showing Additional Price Per Inch for Special Length Traps or Bends.

| Weight of Lead per Running Foot. | STANDARD WEIGHT. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 11⁄2-Lb. | 21/4-Lb. | 31/4-Lb. | 5-Lb. | 6-Lb. |
|  | 11/4-Inch. | 11/2-Inch. | 2-Inch. | 3-Inch. | f-Inch. |
| For each inch of excess length over listed size, on any shape of Trap or Bend, add to the list of nearest listed size. | \$0.031/2 | . $041 / 2$ | .061/4 | .103/4 | . 12 |

Dimension Scales and special price list of Traps and Bends furnished on application.

## DRAWN LEAD TRAPS.

Code.
Inches.
Length of inlet and outlet, inches
Weight of lead per running foot, lbs.
Each.
1701-C.
Plain $3 / 4$ " S " Trap.


1702-C.
Plain "P" Trap.


1703-C.
Plain Running Trap.
PLAIN "S" TRAPS-I700-C.

| Code | Prodambulo | Prodded | Prodding | Prodebar | Prodeggia |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inc | † 11/4 | † 11/2 | †2 | 3 | 4 |
| Length of inlet and outlet, inches.............. | 41/4 inlet, 61 outlet | $41 / 2$ inlet, | $41 / 2$ inlet | 4 inlet, $10^{1 / 2}$ outlet | $31 / 4$ inlet, 11 1/2outlet |
| Weight of lead per running foot, lbs........... | $11 / 2$ | $21 / 4$ | $31 / 4$ | 5 | 6 |
| Each. | \$0.48 | . 80 | 1.28 | 2.69 | 3.25 |
| Weight each, lbs.................................. | $21 / 2$ | $35 / 8$ | $61 / 2$ | $121 / 2$ | $171 / 2$ |

PLAIN 3/4 "S" TRAPS-I70I-C.
Weight each, lbs

Prodendos
4 inlet, ${\underset{5}{3}}_{10}$ outlet
$\$ 2.62$
$121 / 2$

Prodestis 4
$31 / 4$ inlet, 11 outlet 6 3.07 17

| Code.. <br> Inches | Prodeunt $+1 / 4$ | Prodezza $+11 / 2$ | Prodicao $\dagger 2$ | Prodicella 3 | Prodigaba |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Length of inlet and outlet, inches | $41 / 2$ inlet, | $41 / 2$ inlet, | $4 \mathrm{t} / 2$ inlet, | 4 inlet | $31 / 4$ inlet, |
| Weight of lead per running foot, lbs. | $11 / 2$ | 7 21/4 | $\begin{gathered} 8 \text { outl } \\ 31 / 4 \end{gathered}$ | $91 / 2$ out 5 | 10 outlet |
| Each. | \$0.41 | . 65 | 1.10 | 2.24 | 2.49 |
| Weight each, lb | $21 / 8$ | 3 | 5 | $\ldots$ | 111/2 |

PLAIN RUNNING TRAPS-1703-C.


For price of Traps with longer or shorter inlets or outlets, see page 463.
For stock packages, see page 463.
$\dagger$ Carried in San Francisco only.

## DRAWN LEAD TRAPS.

WITH BRASS DRAIN SCREWS.


1704-C.
"S" Trap with Screw. 3/4 "S" Trap with Screw.

1706.C.
$1 / 2$ " S " or "P" Trap with Screw:

Running Trap with Screw.
"S" TRAP WITH SCREW-I704-C.

| Cod | Prodige | Prodigence | Prodigio |
| :---: | :---: | :---: | :---: |
| Inches | 11/4 | $11 / 2$ | 2 |
| Length of inlet and outlet, inches.. | 41/4 inlet, $6^{1 / 4}$ outlet | $41 / 2$ inlet, 7 outlet | 41/2 inlet, 8 outlet |
| Weight of lead per running foot, lbs........... | $11 / 2$ | $21 / 4$ | $31 / 4$ |
| Each. | \$0.58 | . 90 | 1.38 |
| Weight each, lbs. | $21 / 2$ | $35_{5}$ | $61 / 2$ |


| Code | Prodigious | Prodigitas | Prodiguer |
| :---: | :---: | :---: | :---: |
| Inches | $11 / 4$ | +1/2 | 2 |
| Length of inlet and outlet, inches .............. | $4^{1 / 4}$ inlet, $5^{1 / 4}$ outlet | $41 / 2$ inlet, 6 outlet | 41/2 inlet, $71 / 2$ outlet |
| Weight of lead per running foot, lbs........... | $11 / 2$ | 21/4 | $3{ }^{1 / 1 / 4}$ |
| Each.. | \$0.55 | . 81 | 1.30 |
| Weight each, lbs... | $21 / 2$ | 35/3 | $61 / 2$ |

12 "S" OR "P" TRAP WITH SCREW-I706-C.

| Code ................................................. | Prodissimo | Prodition | Proditor |
| :---: | :---: | :---: | :---: |
| Inches .............................................. | $11 / 4$ | $11 / 2$ | $\pm$ |
| Length of inlet and outlet, inches............... | $4^{1 / 2}$ inlet, $6^{1 / 4}$ outlet | $41 / 2$ inlet, 7 outlet | $41 / 2$ inlet, 8 outlet |
| Weight of lead per running foot, lbs........... | $11 / 2$ | $2^{1 / 4}$ | $31 / 4$ |
| Each. | \$0.51 | 75 | 1.20 |
| Weight each, lbs. | $21 / 8$ | 3 | 5 |

## RUNNING TRAP WITH SCREW-I707-C.

| Code | Proditrix | Prodituros | Prodixero |
| :---: | :---: | :---: | :---: |
| Inches | +1䍖 | +11/2 | $\dagger \underline{2}$ |
| Length of inlet and outlet, inches.............. $4^{1 / 2}$ inlet, $5^{1 / 2}$ outlet $5^{1 / 4}$ inlet, $6^{\frac{1}{4}+}$ outlet $5^{\frac{1}{1} / 4}$ inlet, $7^{1 / 2}$ outlet |  |  |  |
| Weight of lead per running foot, lbs........... | $11 / 2$ | 21. | $3{ }^{1 / 4}$ |
| Each. | \$0.48 | 72 | 1.13 |
| Weeight each, lbs. | 2 | 25\% | $43_{4}$ |

For price of Traps with longer or shorter inlets or outlets, see page 463 .
For stock packages, see page 463 .
†Carried in San Francisco only.

## DRAWN LEAD TRAPS.

WITH BRASS DRAIN SCREWS.


1708-C.
Long Outlet " $S$ " Trap.


1709-C.
Long Inlet " S " Trap.

1710.('.

Long Inlet "p" Trap.

LONG OUTLET "S" TRAPS-I708-C.


LONG INLET "P" TRAPS-I710-C.

| Code. | Prodoceo | Prodomous | Prodonties |
| :---: | :---: | :---: | :---: |
| Inche | $\dagger 11 / 4.1$ | $11 / 2$-I | †-I |
| Length of inlet and outlet, inches........ | 173/4 inlet, 6 outlet | 17 inlet, 7 outlet | 16 inlet, 8 outlet |
| Weight of lead per running ft.,lbs. | $11 / 2$ | 21/4 | $3{ }_{4}^{1}$ |
| Each........ | \$0.76 | 1.02 | 1.55 |
| IVeight each, lbs.. | 35/8 | 5 | 8 |

LONG OUTLET "P" TRAPS-I7II-C.


Prodormies Prodormio

Prodromico

$$
\dagger-0
$$

$11 / 2$
$\$ 0.76$
$31 / 8$
21.4
1.02
$41 / 8$

$$
\begin{aligned}
& 31 / 4 \\
& 1.5 .5 \\
& 71 / 8
\end{aligned}
$$

For price of Traps of different lengths of Inlets and Outlets, see page 463.

For stock packages, see page 463 .
+Carried in San Francisco only.

## DRAWN LEAD TRAPS.

## WITH BRASS VENT COUPLINGS.


$\dagger 1712$ C.
" 5 " Trap with $1 / 8$ Bend Brass Vent Coupling.

†1713-C.
"P" Trap with $1 / 8$ Bend Brass Vent Coupling.
"S" TRAPS WITH BRASS VENT COUPLING-I7I2-C.

| Code. | Prodromo | Produccao | Producebas |
| :---: | :---: | :---: | :---: |
| Inches............................................... | $11 / 4$ | $11 / 2$ | 2 |
| Length of inlet and outlet, inches............. | 41/4 inlet, $61 / 4$ outlet | $41 / 2$ inlet, 7 outlet | $41 / 2$ inlet, 8 outlet |
| Weight of lead per running foot, lbs. | $11 / 2$ | $21 / 4$ | $31 / 4$ |
| Vent, inches........................... | $11 / 4$ | $11 / 2$ | $11 / 2$ |
| Each | \$1.73 | 2.31 | 2.95 |
| Weight each, lbs................................. | 23/4 | $43 / 8$ | $71 / 4$ |

## "P" TRAPS WITH BRASS VENT COUPLING-I7I3-C.

| Code | Producemur | Producente | Productabo |
| :---: | :---: | :---: | :---: |
| Inches ............................................................................... | $11 / 4$ | $11 / 2$ | 2 |
| Length of inlet and outlet, inches.............. | $41 / 2$ inlet, 6 outlet | $41 / 2$ inlet, 7 outlet | +1/2 inlet, 8 outlet |
| Weight of lead per running foot, lbs.......... | $11 / 2$ | $21 / 4$ | $31 / 4$ |
| Vent, inches. | $11 / 4$ | $11 / 2$ | $11 / 2$ |
| Each. | \$1.56 | 1.97 | 2.50 |
| Weight each, lbs. | $2 \mathrm{~F} / 8$ | 35/8 | 53/4 |


+1:20-C.

## LEAD DRUM TRAPS.

| Code | Productivo | Producto | Productora |
| :---: | :---: | :---: | :---: |
| Style | Rough Brass | Polished Brass | Nickel-Plated Brass |
|  | Screw | Screw | Screw |
| Size, inches. | $4 \times 10$ | $4 \times 10$ | 4×10 |
| Each | \$2. 01 | 2.21 | 2.31 |
| Weight each, lbs. | ....... | $\ldots$. | $\ldots$ |

Twenty-five in a barrel.

+ Carried in San Francisco only.


## DRAWN LEAD BENDS.



1723-C.
Short Lead Bend.

$1724-\mathrm{C}$.
Short Inlet Extension Lead Bend.

## SHORT LEAD BEND-I723-C.

| Code Inch | Produisant +11/4 | Produit +11/2 | $\begin{aligned} & \text { Produjera } \\ & \dagger \mathbf{2} \end{aligned}$ | Produjeron $+3$ | $\begin{aligned} & \text { Produjeses } \\ & \mathbf{4} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Center to ends, inches | $6 \times 31 / 2$ | 7xt | $73 / 4 \times 33 / 4$ | $81 / 4 \mathrm{x} 4^{1 / 4}$ | $10 \times 5.1 / 2$ |
| Weight of lead per running foot, lbs. | $11 / 2$ | 21/4 | $31 / 4$ | 5 | 6 |
| Each | \$0.25 | . 38 | . 57 | 109 | 1.50 |
| Weight each, lbs.. | $13 / 8$ | 2 | 3 | ...... | $73 / 8$ |

## 4-INCH SHORT INLET EXTENSION LEAD BENDS-I724-C.

| Code. | Produxeris | Produzcan | Produzido | Produzione | Produzir |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inches |  | †5 $1 / 2 \times 15$ | +5 $1 / 2 \times 16$ | †5 $1 / 2 \mathrm{x}$ ( ${ }^{\text {d }}$ | $\dagger$ 5 $1 / 2 \times 20$ |
| Weight of lead per running foot, lbs. | 6 | 6 | 6 | 6 | 6 |
| Each | \$1.70 | 2.00 | 2.12 | 2.30 | 2.48 |
| Wreight each, lbs........................................... | $8^{1 / 4}$ | 93. | 101/4 | 113/4 | 123/4 |


1725.C.

Long Lead Bend.

1726.C.

Long Inlet Extension Lead Bend.

## LONG LEAD BENDS-1725-C.

| Code | Proebeln | Proebelst | Proefgeta | Proefglas | Proefgoud |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inches | +1/4 | †1/2 |  |  | $\pm$ |
| Center to ends, inches | $6 \times 6$ | $7 \times 7$ | $73 / 4 \times 73 / 4$ | $8^{1 / 4} \times 8{ }^{1 / 4}$ | 10x10 |
| Weight of lead per running foot, lbs.................... | $11 / 2$ | 2 $1 / 4$ | $3{ }^{1 / 4}$ | 5 | 6 |
| Each. | \$0.30 | . 50 | 78 | 1.39 | 1.95 |
| Weight each, lbs.. | $11 / 2$ | $21 / 4$ | 4 | ...... | $93 / 8$ |

4-INCH LONG INLET EXTENSION LEAD BENDS-I726-C.

| Cod | Proeflood | Proefmaat | Proefrit | Proefschot $10 \times 18$ | Proefslag |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inches . .................................... | 10x12 | $+10 \times 14$ | $\dagger 10 \times 15$ | $\dagger 10 \times 18$ | $\dagger 10 \times 20$ |
| Weight of lead per rumning foot, 1bs | 6 |  |  |  | 6 |
| Each | \$2.15 | 2.39 | 2.44 | 2.73 | 2.92 |
| Weight each, lbs. | 11 | $111 / 2$ | 12 | $131 / 2$ | $141 / 2$ |

For price of Bends with longer or shorter Inlets or Outlets, see page 463.
For stock packages, see page 463 .
Dimension Scales and price list of lead bends furnished on application. $\dagger$ Carried in San Francisco only.

In Orders and Specifications give Plate Numbers and Sizes.

## COMBINATION LEAD AND IRON FERRULES.

FOR CONNECTING LEAD TO CAST IRON SOIL PIPE.


$\dagger 1730$ - C .
FOR $11 / 2$-INCH LEAD PIPE AND 2-INCH CAST IRON PIPE.


FOR 3-INCH LEAD PIPE AND 3-INCH CAST IRON PIPE.


## COMBINATION LEAD AND IRON BENDS AND FERRULES.


$\dagger 1731$ -.
FOR 4-INCH LEAD PIPE AND 4-INCH CAST IRON PIPE.

| Code Inches | Proemiava $4 \times 12$ | Proemio $4 \times 14$ | Proeti <br> $4 \times 15$ | Proetides $4 \times 16$ | Proetos $4 \times 18$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Length of inlet, inches | $51 / 2$ | $51 / 2$ | $51 / 2$ | $51 / 2$ | $51 / 2$ |
| Each | \$2.20 | 2.44 | 2.50 | 2.62 | 2.80 |
| Weight each, lbs. | 10 | $101 / 2$ | 11 | 11 1/2 | $121 / 2$ |

Measurements are made on lines running exactly through centers of Inlet and Outlet, and intersecting one another at an angle of $90^{\circ}$

+ Carried in San Francisco only.


## COMBINATION LEAD AND BRASS SOLDER NIPPLES.

```
FOR CONNECTING LEAD AND STANDARD IRON PIPE.
```



FOR $11 / 4-I N C H$ LEAD PIPE WITH SPUD FOR $11 / 4-I N C H$ IRON PIPE.

| Code | Proevers | Proeza | Profabaris | Profabor |
| :---: | :---: | :---: | :---: | :---: |
| Inches | 11/4 $\times 6$ | 11/488 | 11/4 $\times 10$ | $11 / 4 \times 12$ |
| Each.. | \$0.44 | . 52 | . 58 | . 63 |
| Weigh | 1 | $11 / 2$ | $13 / 4$ | 2 |

FOR $11 / 2-$ INCH LEAD PIPE WITH SPUD FOR $11 / 2$-INCH IRON PIPE.


FOR 2-INCH LEAD PIPE WITH SPUD FOR 2-INCH IRON PIPE.

| Code. | Profanarla | Profanely | Profaning | Profanolla |
| :---: | :---: | :---: | :---: | :---: |
| Inches | $\mathbf{2 x} 6$ | 2x8 | 2x10 | $\mathbf{2 \times 1 2}$ |
| Each | \$0.86 | . 96 | 1.08 | 1.17 |
| Weigh | 2 | $21 / 2$ | 3 | $33 / 8$ |

PLUMBERS' LEAD TACKS.

$\dagger \mathbf{1 7 3 5}-\mathrm{C}$.

SINGLE.
Code Profanorum ..... $\$ 0.15$

Weight per pair, lbs


DOUBLE.

Code.
Profazaban
Per lb
$\$ 0.15$
Weight each, lbs
$\dagger$ Carried in San Francisco only.

## LEAD PIPE.

| Code Word. | Calibre. |  |  | Thickness of Wall, Inch. | Weight, <br> Per Foot. |  | Approx Weight Lbs. | $\begin{aligned} & \text { Approx. } \\ & \text { Weight } \\ & \text { Reel. } \\ & \text { Lbs. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Lbs. | Ozs. |  |  |
| Proferant ........... | $\dagger$ AAA | $3 / 8$ in. e | ex. pressure.. |  | 3-16 | 1 | 11 | 115 | 725 |
| Proferian | $\dagger$ AA |  | ex. strong.... | 5-32 | 1 | 5 | 90 | 725 |
| Proferidos ........... | A | s | strong.... | 9-64 | 1 | 2 | 90 | 725 |
| Proferimus ......... | B | m | medium. | 1-8 | 1 | 0 | 90 | 725 |
| Proferiste........... | C | li | light | 3-32 | 0 | 13 | 60 | 700 |
| Profertas ............ | $\dagger$ D | f | fountain. | 3-32 | 0 | 10 | 60 | 700 |
| Proferto .... ... ..... | $\dagger$ ¢AA | 1/2 in. e | ex. pressure | 1-4 | 3 | 0 | 120 | 725 |
| Profesa ............ .. | AA |  | ex. strong... | 3-16 | 2 | 0 | 120 | 725 |
| Profesais ............ | A | s | strong... | 5-32 | 1 | 11 | 120 | 725 |
| Profesante .. ....... | B | n | medium | 1-8 | 1 | 4 | 90 | 725 |
| Professar ............ | C | li | light.. | 7-64 | 1 | 0 | 90 | 725 |
| Professons ........... | $\dagger$ D | f | fountain. | 5-64 | 0 | 12 | 60 | 725 |
| Profetaran........... | $\dagger$ AAA | 5/8 in. | ex. pressure. | 17-64 | 3 | 8 | 170 | 725 |
| Profetaste........... | $\dagger$ АA |  | ex. strong.. | 7-32 | 2 | 12 | 170 | 725 |
| Profetiche ........... | A | S | strong.... | 3-16 | 2 | 8 | 170 | 725 |
| Profeticos.......... | B | n | medium. | 5-32 | 2 | 0 | 112 | 725 |
| Profetizo............. | C | 1 | light.. | 9-64 | 1 | 11 | 90 | 700 |
| Proffering ........... | +D | " ex | ex. light.. | 7-64 | 1 | 4 | 90 | 700 |
| Profferta.... ........ | $\dagger \mathrm{E}$ | f | fountain. | 5-64 | 1 | 0 | 90 | 700 |
| Proficisco ............ | +.AA | $3 / 4 \mathrm{in}$. e | ex. pressure | 17-64 | 4 | 8 | 170 | 725 |
| Proficuas ............ | †AA |  | ex. strong. | 15-64 | 3 | 8 | 170 | 725 |
| Profilait ............ | A | s | strong.... | 13-64 | 3 | 0 | 170 | 725 |
| Profiling ............. | B | " | medium. | 5-32 | 2 | 4 | 120 | 725 |
| Profilist.............. | C | 1 | light... | 5-32 | 2 | 1 | 112 | 700 |
| Profitchen ........... | +D | " ex | ex. light | 1-8 | 1 | 10 | 90 | 700 |
| Profiterdo........... | $\dagger \mathrm{E}$ | " fo | fountain. | 3-32 | 1 | 4 | 90 | 700 |
| Profitiez ............. | +AAA | 1 in . | ex. pressure | 19-64 | 6 | 0 | 160 | 900 |
| Profitons ........... | +AA | " ex | ex. strong. | 1-4 | 4 | 12 | 160 | 800 |
| Proflabis............. | † | " st | strong... | 7-32 | 4 | 0 | 160 | 800 |
| Proflabo ............. | $\dagger$ ¢ | " $n$ | medium | 11-64 | 3 | 4 | 160 | 800 |
| Proflamen ........... | C | " lig | light... | 9-64 | 2 | 8 | 160 | 800 |
| Proflavero ........... | D | " ex | ex. light. | 1-8 | 2 | 0 | 120 | 800 |
| Proflictum ........... | +E | " f | fountain. | 3-32 | 1 | 8 | 90 | 725 |
| Profligaba ........... | $\dagger$ AAA | $11 / 4 \mathrm{in}$. | ex. pressure | 9-32 | 7 | 9 | 290 | 925 |
| Profligacy........... | $\dagger$ ¢A | " | ex. strong | 1-4 | 5 | 12 | 160 | 900 |
| Profligar............. | +A | " s | strong...... | 7-32 | 4 | 12 | 160 | 900 |
| Profligues ......... . | †B | " ${ }^{\text {a }}$ | medium. | 11-64 | 3 | 12 | 160 | 900 |
| Profligunt .......... | +C | " 1 | light.. | 9-64 | 3 | 0 | 160 | 800 |
| Profluence ........... | $\dagger$ D | " ex | ex. light. | 7-64 | 2 | 8 | 140 | 800 |
| Profluxero ... ....... | E | " f | fountain. | 3-32 | 2 | 0 | 112 | 800 |
| Profluxit............. | $\dagger$ AAA | $11 / 2 \mathrm{in}$. | ex. pressure. | 5-16 | 8 | 8 | 290 | 925 |
| Profond.............. | $\dagger$ AA |  | ex. strong... | 17-64 | 7 | 4 | 260 | 925 |
| Profondare ......... | $\dagger$ A | " st | strong.... | 15-64 | 6 | 4 | 260 | 900 |
| Profringe ........... | $\dagger$ B | " 1 | medium. | 3-16 | 5 | 0 | 160 | 900 |
| Profudisti........... | +C | " li | light. | 11-64 | 4 | 4 | 160 | 875 |
| Profuga............. | $\dagger$ D | " ex | ex. light. | 9-64 | 3 | 8 | 160 | 875 |
| Profughi ............. | E | " f | fountain. | 1-8 | 3 | 0 | 160 | 800 |
| Profulgent ........... | $\dagger$ AA | 2 in . e | ex. strong | 1-4 | 9 | 0 | 260 | 925 |
| Profumata ........... | $\dagger$ A | " str | strong... | 13-64 | 7 | 0 | 260 | 900 |
| Profumollo ......... | $\dagger$ В | " $\quad 1$ | medium. | 3-16 | 6 | 0 | 160 | 875 |
| Profumoso........... | ${ }^{*}$ C | " 1 | light. | 5-32 | 5 | 4 | 160 | 875 |
| Profundar .. ........ | *D | " e | ex. light | 1-8 | 4 | 0 | 150 | 825 |

* In 10 -foot lengths ; packed 8 lengths in a box.

Per pound
\$......
Order Lead Pipe by letter and inches.
LEAD SOIL PIPE.


In 13 -foot lengths.
Order Lead Soil Pipe by diameter and weight per foot or thickness.

+ Carried in San Francisco only.


## †EX. HEAVY LEAD SOIL PIPE.

| Code Word. | Inside Diameter, Inches. | Thickness of Wall, Inch. | Weight Per Foot. |  | Code Word. | Inside Diameter, Inches. | Thickness of Wall, Inch. | Weight <br> Per Foot. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Lbs. | Ozs. |  |  |  | Lbs. | Ozs. |
| Progemmes ........... | $21 / 2$ | 3-16 | 7 | 13 | Prohigano ............. | 5 | 3-32 | 8 | 4 |
| Progemmo............. | $21 / 2$ | $1-4$ | 11 | 0 | Prohilare ...... ........ | 5 | 1-8 | 10 | 0 |
| Progenera ............. | 3 | 3-16 | 9 | 5 | Prohilast .............. | 5 | 3-16 | 15 | 0 |
| Progenitor.............. | 3 | 1-4 | 12 | 10 | Prohilemmo ........... | 5 | 1-4 | 19 | 0 |
| Progeny ............... | $31 / 2$ | 1-8 | 6 | 2 | Prohilide .............. | $51 / 2$ | 3-16 | 16 | 0 |
| Progeretis ............. | $31 / 2$ | 3-16 | 10 | 0 | Prohilink .............. | $51 / 2$ | 1-4 | 20 | 8 |
| Progero ................ | $31 / 2$ | 1-4 | 15 | 0 | Prohilonge ............ | 6 | 3-32 | 9 | 12 |
| Progerunt .............. | 4 | 1-8 | 8 | 0 | Prohimort .............. | 6 | 1-8 | 13 | 4 |
| Progessero... | 4 | 7-32 | 13 | 0 | Prohimund ............ | 6 | 1-8 | 12 | 0 |
| Progestabo ............ | 4 | 17-64 | 16 | 5 | Prohinge .............. | 6 | 3-16 | 18 | 8 |
| Progestura............. | 4 | 19-64 | 20 | 0 | Prohistory ........ ..... | 6 | 17-64 | 26 | 0 |
| Progetta ................ | $41 / 2$ | 3-16 | 14 | 0 | Prohistrod ............. | 7 | 3-16 | 22 | 0 |
| Progignes .. ........... | $4^{1 / 2}$ | 1-4 | 18 | 8 | Prohitask .............. | 7 | 1-4 | 26 | 0 |

Per pound.
Order Extra Heavy Lead Soil Pipe by diameter and weight per foot or thickness.
$\dagger$ TIN PIPE.

| Code Word. | Inside Diam. Inch. | $\begin{gathered} \text { Ounces } \\ \text { per } \\ \text { Foot. } \end{gathered}$ | Thickness of Wall, Inch. | Lbs. <br> in <br> Coil. | $\begin{gathered} \text { Feet } \\ \text { in } \\ \text { Coil. } \end{gathered}$ | Code Word. | Inside Diam. Inch. | $\begin{gathered} \text { Ounces } \\ \text { per } \\ \text { Foot. } \end{gathered}$ | Thickness of Wall, Inch. | $\begin{gathered} \text { Lbs. } \\ \text { Lit } \\ \text { Coil. } \end{gathered}$ | $\begin{gathered} \text { Feet } \\ \text { in } \\ \text { in } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Proglottis..... | 1/8 | 2 | 1-16 |  |  | Prohiteem | 1/2 | $91 / 2$ | 3-32 | 43 | 72 |
| Prognare .... | $1 / 4$ | 4 | 5-64 | 43 | 172 | Prohitorch... | 5/8 | 10 | 3-32 | 65 | 104 |
| Prognathe ....... ... | $1 / 4$ | 5 | 7-64 | 43 | 138 | Prohoband... | 3/4 | 12 | 3-32 | 83 | 110 |
| Prognato ............. | 1/4 | 6 | 7-64 | 43 | 115 | Prohockit.... | 3/4 | 23 | 5-32 | 83 | 58 |
| Prognidem..... .. | 5/16 | 7 | 17-64 |  |  | Prohodder ... | 1 | 15 | 7-64 | 83 | 89 |
| Prognidis.... | 3/8 | 4 | 1-16 | 43 | 172 | Prohoffe .... | 1 | 20 | 7-64 | 83 | 66 |
| Prognose ... | $3 / 8$ | 5 | 1-16 | 43 | 138 | Prohoggish | 1 | 34 | 11-64 |  |  |
| Prognostic.... | $3 / 8$ | 6 | 3-32 | 43 | 115 | Prohogure ... | $11 / 4$ | 20 | 3-32 | 83 | 66 |
| Programa..... | 3/8 | $81 / 2$ | 3-32 | 43 | 81 | Prohoiden ... | $11 / 2$ | 28 | 7-64 | 83 | 50 |
| Progresado ... | 1/2 | 6 | 1-16 | 43 | 115 | Prohoiland ... | 2 | $42^{1 / 2}$ | 5-32 |  |  |
| Progresar. | 1/2 | 8 | 3-32 | 43 | 86 |  |  |  |  |  |  |

Per pound.
Order Tin Pipe by inch and ounces.

## SHEET LEAD.

| Code Word. | $\begin{aligned} & \text { Weight } \\ & \text { per } \\ & \text { sq. foot lbs. } \end{aligned}$ | Thickness <br> Inch. | Code Word. | Weight per sq. foot lbs. | Thickness Inch. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Progresion......... | $21 / 2$ | 5-128 | Prohoimud | $\dagger 7$ | 7-64 |
| Progressif ......... | 3 | :3-64 | Prohokund | $\dagger 8$ | 1-8 |
| Prohibe............ | †31/2 | 7-128 | Prohombre ...................... | +9 | 9-64 |
| Prohibida........ | 4 | 1-16 | Prohonest | $\dagger 10$ | 5-32 |
| Prohibimos ....... | $\dagger 41 / 2$ | 9-128 | Prohooper | $\dagger 12$ | 3-16 |
| Prohibons ........ | +5 | 5-64 | Prohoppa. | †16 | 1-4 |
| Prohibute...... | 6 | 3-32 | Prohostess........................ | $\dagger 24$ | 3-8 |

Per pound..............................................................................................................
Regular Rolls of Sheet Lead are $81 / 2$ feet wide and 18 to 21 feet long.
Order Sheet Lead by weight.
SHEET TIN.


We can furnish other sizes and thicknesses of sheet tin to order.
$\dagger$ Carried in San Francisco only.

## SOLDERING NIPPLES.


1740.C. Male.


1741-C.
Female.

MALE SOLDERING NIPPLES-I740-C.

| Code. Size, inches.. | Projectil $3 / 8$ | Projecto 1/2 | $\begin{gathered} \text { Projetant } \\ 3 / 4 \end{gathered}$ | $\begin{aligned} & \text { Projetons } \\ & 1 \end{aligned}$ | $\begin{gathered} \text { Prokliden } \\ 11 / 4 \end{gathered}$ | Prokop $11 / 2$ | $\underset{\mathbf{Q}}{\text { Prokruste }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen............................ | \$2.75 | 3.50 | 5.00 | 6.50 | 10.00 | 12.50 | 18.00 |
| Weight per dozen, lbs........... | $11 / 8$ | 2 | 3 | $41 / 8$ | $61 / 2$ | $81 / 8$ | $121 / 8$ |

FEMALE SOLDERING NIPPLES-1741-C.

| Code Size, inches. | Prolaberis $3 / 8$ | Prolapse $1 / 2$ | $\begin{gathered} \text { Prolasso } \\ 3 / 4 \end{gathered}$ | $\begin{aligned} & \text { Prolate } \\ & . \quad 1 \end{aligned}$ | $\begin{aligned} & \text { Prolation } \\ & 11 / 4 \end{aligned}$ | $\begin{aligned} & \text { Prolativos } \\ & 11 / 2 \end{aligned}$ | ${\underset{\mathbf{2}}{ }}_{\text {Prolativum }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen.. | \$2.75 | 3.50 | 5.00 | 6.50 | 10.00 | 12.50 | 18.00 |
| Weight per dozen, lbs.. | 1 | 2 | $21 / 2$ | $31 / 2$ | 51/4 | 8 | 11 |

One dozen in a package.

## SOLDERING UNIONS.



1742-C.
Straight.


1743-C.
Bent.

STRAIGHT SOLDERING UNIONS-I742-C.

| Code Size, inches. | Prolaus 1/2 | Prolectes 3/4 | $\begin{aligned} & \text { Prolefied } \\ & \mathbf{1} \end{aligned}$ | Prolegat $11 / 4$ | Prolepsis $11 / 2$ | $\begin{aligned} & \text { Proleptic } \\ & \mathbf{2} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen.. | \$4.50 | 6.00 | 8.00 | 12.00 | 15.00 | 21.00 |
| Weight per dozen, lbs. | $13 / 4$ | $23 / 4$ | $33 / 4$ | $51 / 4$ | $63 / 4$ | $81 / 4$ |

One dozen in a package.

## BENT SOLDERING UNIONS-I743-C.

| Code Size, inches. | Prolfaca 1/2 | $\underset{\substack{\text { Prolibat }}}{ }$ | Prolificar | $\begin{aligned} & \text { Prolis } \\ & 11 / 4 \end{aligned}$ | $\begin{gathered} \text { Prolixa } \\ 1 / 2 \end{gathered}$ | $\underset{\underset{\sim}{~ P r o l i x a b o ~}}{\text { Pro }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$6.50 | 9.00 | 11.00 | 16.00 | 22.00 | 30.00 |
| Weight per dozen, lbs. | $21 / 2$ | $33 / 4$ | $51 / 4$ | $71 / 2$ | $91 / 2$ | $113 / 4$ |

One dozen in a package.

BOILER COUPLINGS.

```
BRASS. SPUD THREADED FOR 1-INCH IRON PIPE.
```


175. C.

STRAIGHT FOR LEAD PIPE.

| Code | Prolochus | Prolocutor |
| :---: | :---: | :---: |
| Style | Plain Face | Ground Face |
| Size, inches | 3/4 | 3/4 |
| Per dozen | \$8.00 | 9.00 |
| Weight per doz., lbs | $61 / 2$ | $61 / 2$ |


1746.C.

BENT FOR LEAD PIPE.

| Code | Prologar | Prologato |
| :---: | :---: | :---: |
| Style | Plain Face | Ground Face |
| Size, inches | 3/4 | 3/4 |
| Per dozen. | \$9.00 | 10.00 |
| W'eight per doz., lbs.. | $83 /$ | $83 / 4$ |

PER SET OF FOUR (TWO BENT, TWO STRAIGHT, ONE TAPPED SPUD).


Six sets in a box.

1747. C . STRAIGHT FOR IRON PIPE.

| Code................. | Prolonga | Prolonging |
| :--- | :---: | :---: |
| Style ................... | Plain Face Ground Face |  |
| Size, inches............ | $3 / 4$ | $3 / 4$ |
| Per dozen............. | $\$ 10.00$ | 11.00 |
| Weight per doz., lbs.. | $71 / 4$ | $71 / 4$ |


1748.C. BENT FOR IRON PIPE.

| Code | Prolubia | Prolubido |
| :---: | :---: | :---: |
| Style | Plain Face | Ground Face |
| Size, inches | 3/4 | 3/4. |
| Per dozen | \$11.00 | 12.00 |
| Weight per doz., lbs.. | $91 / 4$ | $91 / 4$ |

PER SET OF FOUR (TWO BENT, TWO STRAIGHT, ONE TAPPED SPUD).

| Code | Proludes | Proludunt |
| :---: | :---: | :---: |
| Style | Plain Face | Ground Face |
| Size, inches. | 3/4 | $3 / 4$ |
| Per set | \$3.50 | 3.85 |
| Weight per set, lbs | 27/8 | 27/3 |

Six sets in a box.

## PLAIN COUPLINGS.



WASTES AND WASHERS.
BRASS. HEAD SCREWED FOR IRON PIPE.

$\dagger 1751$ - C.
Bath.


†1752-C. Tray or Tank.

| Code. | Promach | Promagem | Promanabo |
| :---: | :---: | :---: | :---: |
| Size, inches | 11/4 | 11/2 | 2 |
| Per dozen. | \$10.00 | 17.00 | 21.00 |
| Weight per doz., lbs... | 81/2 | 12 | 19 |

DECK SCREWS.
TRAP SCREWS.


1753-C.
Standard Trap Screw.


175t-C.
Nickel-Plated Trap Screw with projecting flange 4 inch.
Per dozen
$\$ 35.00$


1755 - ('. Finished Brass.

TRAP SCREWS-I753-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | † Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| + 3/4 | 1 | Promanetis | \$2.25 | Promergis | \$4.50 |
| 1 | $11 / 4$ | Promebaris | +2.50 | Promessa | \$.00 |
| $11 / 4$ | $23 / 4$ | Promediar | 3.00 | Prometian | 6.00 |
| $11 / 2$ | $43 / 4$ | Promedio | 4.00 | Prometteur | 7.50 |
| 2 | $51 / 2$ | Promenade | 7.00 | Promettido | 11.00 |
| +2 $1 / 2$ | $61 / 2$ | Promeneur | 10.00 | Prometto | 15.00 |
| +3 | 9 | Promeniez | 15.00 | Prominor | 20.00 |
| 4 | $121 / 4$ | Promenores | 20.00 | Prominulos | 26.00 |

†DECK SCREWS-1755-C.

| Code.. | Promiscam | Promiscuo | Promission | Promissive | Promissos | Promitorenr |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1 | $11 / 4$ | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Per dozen. | \$10.00 | 12.00 | 14.00 | 18.00 | 24.00 | 33.00 |
| Weight per dozen, lbs.. | $63 / 4$ | 12 | $131 / 2$ | 16 | 19 | 27 |

$\dagger$ Carried in San Francisco only.

BRASS FERRULES.


1760-C.
Plain Ferrule.

$\dagger$ 1761-1.
Ferrule with Trap Screw.

PLAIN BRASS FERRULES-1760-C.

† BRASS FERRULES WITH TRAP SCREW-1761-C.



REDUCING FERRULE.

| Code | Promovian | Promozione |
| :---: | :---: | :---: |
| Size, inches. | + $2 \times 11 / 4$ | $\mathbf{2 x 1 1 / 2}$ |
| Per dozen. | \$5.00 | 5.00 |
| Weight per dozen, lbs..... | $71 / 4$ | 53/4 |


$\dagger 1763$ - C .
BENT FERRULE.

| Code | Promptabis | Promptamus |
| :---: | :---: | :---: |
| Size, inches.................... | $\geq$ | $\pm$ |
| Per dozen..................... | \$12.00 | 24.00 |
| Weight per dozen, lbs... | 11 | 35 |

+ Carried in San Francisco only.

IRON FERRULE.
WITH BRASS TRAP SCREW.


1764-C.

## BRASS SLEEVE.



1765-C.

IRON FERRULE WITH BRASS TRAP SCREW-1764-C.

| Code | Promptavit | Prompto | Promptulas |
| :---: | :---: | :---: | :---: |
| Size, inches. | 2 | $\dagger 3$ | 4 |
| Each. | \$0.30 | . 40 | . 50 |
| Weight each, lbs. | $11 / 8$ | 2 | 23/4 |

## BRASS SLEEVES-1765-C.

| Code Size, inches. | Prompture $\dagger 2$ | Promulca $+3$ | $\begin{gathered} \text { Promulgano } \\ \mathbf{4} \end{gathered}$ | Promulge $\dagger$ - | $\begin{aligned} & \text { Promulsum } \\ & +6 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$4.00 | 8.00 | 10.00 | 25.00 | 34.00 |
| Weight per dozen, lbs.............................. | $41 / 2$ | $83 / 4$ | 13 | 191/2 | 26 |

## THREADED BRASS COLLARS.

FOR CONNECTING BRASS TUBING OR LEAD PIPE TO IRON PIPE.


1767-C.

| Code | Promunt | Promuras | Promutuos |
| :---: | :---: | :---: | :---: |
| Size, ins | $1{ }^{1 / 4} \times 1 / 1 / 4$ | $11 / 2 \times 11 / 2$ | $11 / 2 \times 11 / 4$ |
| Inside dia., ins.... | 11/4 | $11 / 2$ | $11 / 4$ |
| Out. thread I. P., ins... | $11 / 4$ | $11 / 2$ | $11 / 2$ |
| Each | \$0.15 | 20 | 25 |
| Wgt. per 100, lbs... | 7 | $71 / 2$ | $81 / 2$ |

ROUGH BRASS SLIP JOINT NUTS.

FOR MAKING SLIP JOINT CONNECTIONS WITH IRON PIPE.

1768.C.

$\dagger$ Carried in San Francisco only.

BRASS STRAINERS.

†PLAIN FINISHED-1770-C.

| Code | Pronacro | Pronador | Pronapide | Pronatabo | Proneness | Pronepos | Pronepotem |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 |
| Per dozen.. | \$1.20 | 1.45 | 1.80 | 2.40 | 3.00 | 4.60 | 4.80 |
| IVeight per dozen, lbs..... | $3 / 8$ | 5/8 | 7/8 | $13 / 8$ | $13 / 4$ | $21 /+$ | $31 / 4$ |

+ PLAIN NICKEL-PLATED-I770-C.

| Code. | Pronepti | Proneurs | Pronging | Pronipote | Pronkers | Pronkgraf | Pronkstuk |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | $\pm$ |
| Per dozen.................... | \$1.75 | 2.25 | 3.00 | 4.20 | 5.00 | 6.00 | 8.00 |
| Weight per dozen, lbs..... | $3 / 8$ | 5/8 | 7/8 | $13 / 8$ | 13/4 | $21 / 4$ | $31 /+$ |

CONVEX FINISHED-I77I-C.

| Code | Pronome | Pronominal | Pronomus | Prononcer |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 2 | $21 / 2$ | 3 | $\dagger \pm$ |
| Per dozen | \$3.00 | 3.60 | +. 20 | 6.00 |
| Weight per dozen, lbs | 7/3 | 1 | $11 / 2$ | 3 |

+CONVEX NICKEL-PLATED-1771-C.

| Code | Pronostico | Prontezza | Prontitul | Pronubabo |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | 2 | $21 / 2$ | 3 | $\pm$ |
| Per dozen.. | \$5.25 | 6.25 | 7.25 | 9.00 |
| Weight per | 7/8 | 1 | $11 / 2$ | 3 |

FANCY FINISHED-1772-C.

| Code | Pronubial | Pronubis | Pronubo | Pronuncio | Pronumzia | Pronurus |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $11 / 2$ | 2 | $21 / 2$ | 3 | +31/2 | $\dagger 4$ |
| Per dozen. | \$1.45 | 1.80 | 2.40 | 3.00 | 4.60 | 4.80 |
| W'eight per dozen, lbs ...................... | $3 / 8$ | 3/4 | $11 / 4$ | $13 / 8$ | $21 \times$ | $23 / 8$ |

† FANCY NICKEL-PLATED-1772-C.

| Cod | Proodicos | Proodicum | Proofless | Propagador | Propagarlo | Propagavit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | $t$ |
| Per dozen | \$2. 25 | 2.80 | 4.20 | 5.00 | 6.00 | 7.00 |
| W'eight per dozen, l | $3 / 8$ | $3 / 4$ | $11 / 4$ | $13 / 8$ | 21/4 | $23 / 8$ |

All this page one dozen in a package.
+Carried in San Francisco only.

## STAMPED BRASS PLUGS.



Nickel-Plated Stamped Brass P. O. Basin Plug. With Rubber Stopper.


Nickel-Plated Stamped Brass C. O. Basin Plug. With Rubber Stopper.

| Code........................ .. ................ | Propaghi | Code........................................ | Propagibus |
| :---: | :---: | :---: | :---: |
| Per dozen.................... ................. | \$10.20 | Per dozen.................................. | \$10.00 |
| Weight per dozen, lbs........... .......... | $51 / 2$ | Weight per dozen, lbs................... | $51 / 2$ |


1777.C.

Nickel-Plated Stamped Brass Bath or Sink Plug.

Code.

| Propagions | Propagmen |
| :---: | :---: |
| $\mathbf{1 1 / 4}$ | $\mathbf{1} 1 / 2$ |
| $\$ 2.75$ | 4.00 |
| $11 / 4$ | $13 / 8$ |

Size, inches. $11 / 4$

Code
Propagollo


Stamped Brass Wash Tray Plug.

One dozen in a box.
$\dagger$ Carried in San Francisco only.

## CAST BRASS PLUGS.

## WITH BRASS STOPPERS.


† 1779.C.
Nickel-Plated C. O. Basin Plug.
Code $\qquad$
Size, inch .
Per dozen.
Weight per dozen, lbs..................... $71 / 8$ .
$\$ 8.50$
Weight per dozen, lbs
Code ...............................................Propalando
Code ..............................................Propalando
Nickel-Plated P. O. Basin Plug.
Size, inch.
$\$ 9.50$
Per dozen.
$\$ 9.50$
One dozen in a box.

1780.C.

## BATH OR SINK PLUGS.



## WASH TRAY PLUGS.



BATH OR SINK PLUGS-I78I-C.


One dozen in a box.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## CAST BRASS PLUGS.

WITH RUBBER STOPPERS.

+1783 - C.
Nickel-Plated C. O. Basin Plug.


1784-C.


1785-C.

| Code | Propendeis | Code | Propending | Code | Properabat | Properabis |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inch........... | 1 | Size, inch.. | 1 | Size, inches...... | 11/4 | $11 / 2$ |
| Per dozen. | \$5.50 | Per dozen. | \$6.00 | Per dozen. | \$10.50 | 15.00 |
| Weight per dozen, lbs.. | 73/4 | Weight per dozen, lbs.. | 73/4 | Dia. of Flange, inches Weight per dozen, lbs.. | $\begin{aligned} & 2^{1 / 2} \\ & 18 \end{aligned}$ | $\begin{gathered} 3 \\ 21 \end{gathered}$ |



1786-C.
Bath or Sink Plug. With Rubber Stopper.

$\dagger$ 1787-C.
Wash Tray Plug. With Rubber Stopper.

BATH OR SINK PLUG-1786-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $\dagger 1$ | 13/4 | Properamus................ | \$2.00 | Propexi................. | \$2.50 |
| $11 / 4$ | 23/4 | Properavit .................. | 2.25 | Propexos...... ......... | 2.75 |
| $\mathbf{1}_{1 / 2}$ | $31 / 4$ | Properness............. ..... | 3.50 | Propexum............... | $4.00$ |
| $+2$ | 6 | Propertied ....... .......... | 5.00 | Propgat................. | 6.00 |

$\dagger$ WASH TRAY PLUG—1787-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $11 /$ | 4 | Prophani.................... | \$3.25 | Prophecia.............. | \$4.25 |
| 1 1/2 | 5 | Prophanos............... | 4.00 | Prophecies............. | 5.00 |
| 2 | $71 / 2$ | Prophanum................. | 6.00 | Prophetar.............. | 7.50 |

One dozen in a box
In Orders and Specifications give Plate Numbers and Sizes.

## RUBBER STOPPERS.

## WITH NICKEL-PLATED RINGS



1790-('.

| Code Size, inches. | $\underset{3 / 4}{\text { Propiabo }}$ | Propiamus 7/8 | $\begin{gathered} \text { Propice } \\ 1 \end{gathered}$ | $\begin{gathered} \text { Propiciar } \\ 11 / 8 \end{gathered}$ | Propiedad $11 / 4$ | $\begin{gathered} \text { Propilabis } \\ 11 / 2 \end{gathered}$ | ${\underset{\underline{Q}}{ }}_{\text {Piopilavit }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$1.20 | 1.20 | 1.20 | 1.25 | 1.50 | 2.00 | 3.00 |
| Weight per dozen, lbs.... | 3/8 | 1/2 | F8 | $3 / 4$ | 7/8 | 1 | 15/8 |

## GOOD RUBBER STOPPERS.




| Code | Propinaran |
| :---: | :---: |
| Outside diameter, inches | $\underline{\square} 58$ |
| Per dozen. | $\$ 6.00$ |
| Weight per dozen, lbs.. | $11 / 4$ |

BRASS SAFE WASTES.
NICKEL-PLATED WITH 2-INCH DIAMETER DETACHABLE STRAINERS.

1793. ('.

Code.
Size, inch..........................................
Per dozen........


179t-C.-Threaded for $3 / 4$ inch Iron Pipe.

Code
Size, coupling inch.......... Propining
Per dozen............... $\$ 9.00$

179.5-C.

1755-C.-Coupling, 1 inch. Code. Size, coupling inch ..... 1 Per dozen................. $\$ 15.00$

In Orders and Specifications give Plate Numbers and Sizes.

## SINK GRATE.


$\dagger 1800$ - C .
NICKEL-PLATED WITH DETACHABLE STRAINER.

| Code | Propitious |
| :---: | :---: |
| Diameter of flange, in | 35/16 |
| Size of coupling, inche | 13/4 |
| Per dozen | \$51.00 |
| Weight per dozen, lbs | 24 |

RAISED BRASS STRAINER.

$\dagger$ 1801-C.
NICKEL.PLATED FOR URINAL TROUGH.
Code..

Proplasm
Size of coupling, inches...........................11/2

Per dozen..................................... \$54.50
Weight per dozen, lbs. $\qquad$

## RAISED BRASS STRAINERS.


† 1802-C.

†1803.C.
†RAISED BRASS STRAINER WITH FLANGE-1802-C.

Finished.
$\qquad$
Size, inches.
Per dozen.

| Proplastic | Propodium |
| :---: | :---: |
| $\mathbf{2}$ | $\mathbf{3}$ |

$\$ 8.00 \quad 12.00$

Nickel-Plated. $\begin{array}{cc}\text { Propolarum } \\ \mathbf{2} & \text { Propoleos } \\ \mathbf{3}\end{array}$
$10.00 \quad 15.00$
$\dagger$ RAISED BRASS STRAINER WITH TRAP SCREW-I803-C.
Finished. Nickel-Plated.

|  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: |
| Code. | Propolibus | Propoliser | Propomata | Propondria |
| Size, inche | 2 |  | 2 | 3 |
| Per dozen... | \$15.00 | 30.00 | 17.00 | 34.00 |

Weight per dozen, lbs
$\$ 15.00 \quad 30.00$
$17.00 \quad 34.00$
†Carried in San Francisco only.

## BELL TRAP FLOOR DRAIN.

## BRASS WITH IRON FORKED LOCK NUT.



Diameter of flange 4 inches. Coupling $1 \frac{1}{2}$-inch.

Code
Each
Weight each, lbs.


Sectional View.

| Rough Brass | Rough Brass |
| :---: | :---: |
| with Finished | with Nickel-Plated |
| Flange and | Flange and |
| Strainer. | Strainer. |
| Proponessi | Proponera |
| $\$ 2.80$ | 3.20 |
| 3 | 3 |

## DRIP CUP FOR MARBLE DRINKING FOUNTAIN.

NICKEL-PLATED.


Diameter of Flange, 5 inches. Coupling, $11 / 4$ inches.
Code
$\dagger$ Carried in San Francisco only.

In Orders and Specifications give Plate Numbers and Sizes.

## CHAIN STAYS.

## BRASS. NICKEL-PLATED


1815.C.

No. 0-For Wood.


1816-C.
No. 1


1817-C.
No. 2

1818.C.

No. 3-For Cock Hole.


Number.

| Propontica <br> $+\mathbf{0}$ | Proponunt <br> $\mathbf{1}$ | Proposable <br> $\mathbf{2}$ | Proposait |
| :---: | :---: | :---: | :---: |
| $\$ 2.50$ | 2.50 | 3.75 | 4.25 |
| $1 / 2$ | $3 / 4$ | $11 / 8$ | 2 |

One dozen in a box.


| Code <br> Number. | $\underset{\ddagger}{\text { Proposames }}$ | Proposcras 5 | $\underset{\mathbf{6}}{\text { Proposito }}$ | $\begin{gathered} \text { Propound } \\ 11 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$6.50 | 8.00 | 9.00 | 5.25 |
| Weight per dozen, lbs.. | 5 | 21/8 | $41 / 2$ | $31 / 4$ |

One dozen in a box.

+ Carried in San Francisco only.


## CHAIN STAYS.

NICKEL-PLATED.


FOR COCK HOLE WITH GOLD-LINED
REMOVABLE TRAY.

| Code | Proppage | Code. | Propretor |
| :---: | :---: | :---: | :---: |
| Number | 18 | Number | 19 |
| Size tray, inches | $41 / 4 \times 27 / 8$ | Size tray, inches. | $41 / 2 \times 27 / 8$ |
| Each | \$5.00 | Each.. | \$6.00 |
| Weight each, lbs | 1 | Weight each, lbs | $1 \mathrm{t} /$ |

One-half dozen in a box.

## COCK HOLE COVERS.



1830-C.
FOR BASIN COCK HOLE.

Per dozen.
Weight per dozen, lbs.


1831-6. FOR BATH COCK HOLE.

Weight per dozen, lbs21/4

One dozen in a package.

## SINGLE JACK CHAIN.

CUT SHOWS EXACT SIZES.


| Code | Propteres | Proptervia | Proptoma |
| :---: | :---: | :---: | :---: |
| Number | 9 | 10 | 12 |
| Per dozen yards. | \$0.90 | . 80 | . 44 |
| Weight per package, lbs. | 43/4 | $33 / 4$ | $23 / 3$ |

One dozen yards in a package.

BRASS JACK CHAIN.

| Code ${ }^{\text {P }}$ | Propudia | Propuesto | Propugnar | Propugno | Propulsaba | Propulse |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | 8 | 10 | 12 | 13 | 14 | 15 |
| Per dozen yards . | \$5.25 | 3.50 | 2.05 | 1.70 | 1.35 | 1.00 |
| Weight per package, lbs.. | 63/4 | 4 | $21 / 2$ | 2 | $15 / 8$ | 11/4 |
| Code |  | Propulsif | Propunges | Proposiste | Propusol | Prosador |
| Number |  | 16 | 17 | 18 | 20 | 22 |
| Per dozen yards.. |  | \$0.86 | . 2 | . 60 | . 50 | 40 |
| Weight per package, lbs |  | 1 | 7/8 | 5/8 | 3/8 | 1/4 |

One dozen yards in a package.
NICKEL-PLATED JACK CHAINS.

| Code | Prosailler | Prosaique | Prosaismo | Prosaist | Prosalium | Prosammo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | 12 | 13 | 14 | 15 | 16 | 17 |
| Per dozen yards.. | \$2.56 | 2.12 | 1.69 | 1.25 | 1.07 | 1.07 |
| Weight per package, lbs.. | $21 / 2$ | 2 | $15 / 3$ | $11 / 4$ | 1 | 7/3 |

One dozen yards in a package.


1836 . C .

## BRASS SAFETY CHAIN.



One dozen yards in a package.


## NICKEL-PLATED SAFETY CHAIN ON REELS.

| Code <br> Number | Proscholi $+00$ | $\begin{gathered} \text { Proscholos } \\ 0 \end{gathered}$ | $\begin{gathered} \text { Proscindes } \\ \mathbf{1} \end{gathered}$ | Proscoll † |
| :---: | :---: | :---: | :---: | :---: |
| Per 100 feet | \$3.80 | 4.50 | 5.40 | 6.60 |
| Wt. per reel, lbs... | $101 / 2$ | 13 | $15 \mathrm{I} / 2$ | 24 |

$\dagger$ Carried in San Francisco only.
1837 . C .
In Orders and Specifications give Plate Numbers and Sizes.

## BASIN AND BATH CHAINS AND SNAPS. BRASS.


1840.C.

No. 00-Basin Chains.
Code.
Style.
Proscopia Nickel-Plated 16
$\$ 1.15$
3/8

No. 1-Bath Chains.
Code Style........................... Brass $\dagger$ Nickel-Plated

Proscopide Proscriba Length, inches............ $16 \quad 16$
Per dozen.
$\$ 1.60$
1.75

Weight per dozen, lbs... 5/8 5/8

One dozen in a package.

## WASH TRAY CHAINS AND SNAPS.

No. 12 BRASS, 20 INCHES LONG.


1841-C.

| Code | Proscripsi | Prosdocas |
| :---: | :---: | :---: |
| Style. | Brass | Nickel-Plated |
| Per dozen. | \$1.20 | 1.4. |
| Weight per dozen; lbs. | $11 / 2$ | $11 / 2$ |

One dozen in a package.
SNAPS OR SPLIT LINKS FOR CHAIN.
BRASS. NICKEL-PLATED.


1842-C.
Cut shows exact size. Small.
Code.
Per gross.


1843-C.
Cut shows exact size. Large.
Code.
Per gros

+ Carried in San Francisco only.


## FLANGES OR ESCUTCHEONS.



DEEP FLANGES FOR IRON PIPE-I85I-C.
Nickel-Plated.

| Code. | Proseleni | Proselytes | Proselyto | Proseminas | Prosenes | Prosequere |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $+3 / 8 \times 21 / 8$ | $3 / 8 \times 21 / 2$ | 1/2x21/8 | $3 / 4 \times 21 / 2$ | 1x3 | +11/4x3 |
| Diameter of hole, inches. | 21/32 | 21/32 | 27/32 | 11/16 | 15/16 | $15 / 8$ |
| Diameter of base, inches. | $21 / 8$ | $21 / 8$ | $21 / 8$ | $21 / 2$ | 3 | 3 |
| Depth, inches.. | 5/8 | 5/8 | 5/8 | $3 / 4$ | 1 | 1 |
| Per dozen.. | \$0.50 | . 50 | . 50 | 75 | . 75 | 7 |
| W'eight per gross, lbs. | $11 / 2$ | 25\% | $21 / 2$ | 27/3 | $21 / 2$ | $5^{1 / 4}$ |
| One gross in a package. |  |  |  |  |  |  |

## DEEP FLANGES FOR TUBING-1852-C.

Nickel-Plated.

| Code | Prosequor | Proseranno | Proserebat |
| :---: | :---: | :---: | :---: |
| Size, inches | $11 / 4$ | $11 / 2$ | +2 |
| Diameter of hole, inches. | $11 / 4$ | $11 / 2$ | 2 |
| Diameter of base, inches | 3 | 3 | $33 / 4$ |
| Depth, inches. | 1 | 1 | $11 / 8$ |
| Per dozen. | \$0.75 | . 75 | 1.20 |
| Weight per gross, lbs | $53 / 3$ | $51 / 3$ | (i |

One gross in a package.
+Carried in San Francisco only:

## BASIN CLAMPS.

SUPERIOR.

185.)-C.

Polished Sheet Brass.
Adjusts itself to any basin and is guaranteed not to slip, break or bend.

Code.
Per dozen
Prosertos
$\$ 1.00$
Weight per dozen, lbs.. 3/4
Three dozen in a box.

STAR.


1856-C.
Heary Finished Brass.
The Star will do the work of mosit adjustable clamps.

Code. $\qquad$ Proserunt

Code. $\qquad$ Prosettore
Per dozen $\$ 0.50$ Per dozen $\$ 1.00$ Weight per dozen, lbs.. $5 / 8$

Twelve dozen in a box.

No. 3.


Cast Brass.

## SLIP JOINT LAVATORY SUPPLY PIPE ELBOWS.

```
POLISHED BRASS NICKEL-PLATED.
```


$\dagger$ 1860-C.
These Slip Joints are furnished with Rubber Washers and Brass Chafing Ring.


For Straight Slip Joints, see page 204.

+ Carried in San Franciscn only.


## NAUGATUCK SEAMLESS COPPER BALLS.


$1865-\mathrm{C}$.
Without Stem.


1866-C.
With Stem.

## NAUGATUCK COPPER BALLS WITHOUT STEM-I865-C.



| Prosigias | Prosigue | Prosisto | Prosocrus | Prosodical | Prosodist | Prosoma | Prosopide |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{0}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{1 0}$ | $\mathbf{1 2}$ |
| $\$ 5.25$ | 6.25 | 7.25 | 8.25 | 17.00 | 27.00 | 47.00 | 60.00 |
| $21 / 2$ | 5 | 8 | 9 | 15 | 22 | 38 | 40 |

$3,4,5,6,7$ and 8 -inch Naugatuck Balls have socket threaded $7 / 32$ inch, 24 threads to the inch.
10 and 12 -inch Naugatuck Balls have socket threaded for $1 / 8$-inch Iron Pipe.

## NAUGATUCK COPPER BALLS WITH STEM-I866-C.

Code. $\qquad$

Per dozen. $\$ 7.25 \quad 10.25 \quad 18.50$ 30.00

Weight per dozen, lbs.................................................... $71 / 4 \quad 10 \frac{1}{4} \quad 19 \quad 26$
Stems for Naugatuck Balls are 8 inches long, both ends threaded $7 / 32$ inch, 24 threads to the inch.

CORRUGATED COPPER SPUN COPPER BALLS. BALLS.


1867 - C.


| Code Size, inches | Prospicuos | $\begin{gathered} \text { Prostabunt } \\ \mathbf{6} \end{gathered}$ |
| :---: | :---: | :---: |
| Per dozen. | \$5.50 | 6.25 |
| Weight per dozen, lbs........ | 3 | $51 / 2$ |


| Code Size, inches. | Prostadem | $\stackrel{\text { Prostadis }}{8}$ | Prostas 10 |
| :---: | :---: | :---: | :---: |
| Per dozen.............. | \$9.75 | 14.00 | 22.50 |
| W't. per doz., lbs..... | 9 | 13 | 21 |

5, 6 and 7 -inch Balls have Sockets threaded $7 / 36$ inch, 20 threads to the inch.
8 -inch Balls have Sockets threaded $1 / 4$ inch, 20 threads to the inch.
10 -inch Balls have Sockets threaded 5/16 inch, 20 threads to the inch.

## SPUN ZINC BALLS.



## BRASS STEMS OR RODS FOR CORRUGATED COPPER, SPUN COPPER AND ZINC BALLS.

## THESE STEMS HAVE 20 THREADS TO THE INCH.



## GLASS BALLS OR FLOATS.

WITH STEMS OR RODS.


Stems Threaded, $7 / 32$ inch; 24 Threads to the Inch.


L BURNER GAS COCKS.

+1880 - ${ }^{\circ}$.
Code.
Size, inch......
Per dozen..... $\$ 6.20 \quad 5.20 \quad 4.55 \quad 4.25$

## INDEPENDENT COCKS.

FOR RUBBER HOSE.


1881-C.
Code.
Size, inch...
Prosubigo Prosumni Prosumnus Prosupant
Per dozen... $\$ 8.00$
6.50
6.00
5.50

HOSE GAS COCKS. FEMALE.


1882-C.

GAS STOP COCKS.

BRASS PILLARS.
+1885 - C .
Code. Protean
Per dozen......................................... $\$ 0.20$

$\dagger 1883 . \mathrm{C}$.
Code........... Protagia Protagon Protandry Protaster Size, inch... $1 / 2 \times 1 / 2 \quad 3 / 8 \times 3 / 8 \quad 1 / 4 \times^{1 / 4} \quad 1 / 8 \times 1 / 8$ $\begin{array}{lllll}\text { Per dozen1... } & \$ 5.60 & 4.90 & 4.55 & 3.90\end{array}$


## TWO-LIGHT BRACKET BODIES.


$\dagger 1884$ - ${ }^{\prime}$.

$\dagger$ Carried in San Francisco only.

## STIFF GAS BRACKETS.


+1590-C.
STRAIGHT $3 / 8-I N C H$ FIGURED GILT TUBE. Code


†1892-C.
STRAIGHT SQUARE TWIST POLISHED BRASS.
Code
Protegido
$\$ 0.70$

$\dagger 1891$ - $\mathbf{C}$.
STRAIGHT SQUARE POLISHED BRASS TUBE. Code............................................ Proteggo Length, inches................................................................................. $\mathrm{E}_{5}$

†1893.C.
CURVE $3 / 8-\operatorname{INCH}$ FIGURED GILT TUBE.
Code
Each.

Protegimus
$\$ 0.45$

## SINGLE SWING GAS BRACKETS.


$\dagger 1594$ C.
1894-C.
1 SWING $3 / 8-1 N C H$ FIGURED G! $\mid L T$ TUBE.

Code Protegions
Each.

$\dagger$ Carried in San Francisco only:

## DOUBLE SWING GAS BRACKETS.



## TRIPLE SWING GAS BRACKETS.


$\dagger 1898 . \mathrm{C}$.

1899-C
3-swing Square Polished Brass Tube.
Code....................... Protendero
Each........................... $\$ 1.85$

## GAS PENDANTS.



## STORK NECKS.



Polished Brass Combination Stork Neck. Connects with Pillar Burner by removing gas tip. Can be used with rubber-tipped gas tubing or with threaded connections.


Polished Brass Stork Neck for use with threaded connections only.

Code
Protinus
Number 990
Per dozen
$\$ 3.60$

BOX PLATES.
Polished Brass.


Diameter, $21 / 2$ inch for $3 / 8$-inch Iron Pipe.

$\dagger$ Carried in San Francisco only.


| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | $12 \mathrm{I} / 2$ | Protocolo | \$23.00 | Protokoll | \$27.00 |
| +5/8 $\times$ x 1/2 | $12 \mathrm{t} / 2$ | Protofillo | 27.00 | Protollis | 31.00 |
| $5 / 8 \times 3 / 4$ | 13 | Protogala | 27.00 | Protollunt | 31.00 |
| $+1^{3 / 4}$ | 17 | Protogenis | 34.00 | Protologia | 40.00 |
| $\dagger 1$ | 27 1/2 | Protogyny | 54.00 | Protomante | 64.00 |

One-half dozen in a box.

† 1926-C.
WITH SHOULDER FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 12 | Protonabis | \$21.00 | Protopine | \$25.00 |
| $5 / 8 \times 1 / 2$ | $121 / 2$ | Protonie | 24.00 | Protoplasm | 28.00 |
| $5 / 8 \times 3 / 4$ | 13 | Protopapa | 24.00 | Protopope | 28.00 |

One-half dozen in a box.
$\dagger$ Carried in San Francisco only.

FULLER HOSE BIBBS.


SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
|  | 13 | Protosalt ................. | \$26.00 | Protozoon ........... | \$30.00 |
| + 5/8x $1 / 2$ | 14 | Protoslave................... | 31.00 | Protract ...... ....... | 35.00 |
| 5/8×3/4 | 14 | Protospore ............... | 31.00 | Protraggo ........... | 35.00 |
| 3/4 | $171 / 2$ | Protossido ................ | 38.00 | Protrahir ........... | 44.00 |
| +1 | 25 | Prototipia ................ | 58.00 | Protritos............ | 68.00 |

One-half dozen in a box.


WITH SHOULDER FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | $121 / 2$ | Protropa ................ | \$24.00 | Protrude............. | \$28.00 |
| $5 / 8 \times 1 / 2$ | $121 / 2$ | Protropis .................. | 28.00 | Protrudunt ......... | 32.00 |
| $5 / 8 \times 3 / 4$ | $131 / 2$ | Protropum .............. | 28.00 | Protrusile........... | 32.00 |

One-half dozen in a box.

+ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.


## "MONARCH" FULLER BIBBS.

BEST QUALITY RED METAL. EXTRA HEAVY PATTERN. HIGHLY POLISHED AND FINISHED NON-HAMMERING AND ANTI-RATTLING. ARTISTIC DESIGN. TESTED AND GUARANTEED.


1930-C.
"MONARCH" FULLER PLAIN BIBBS. SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $\begin{gathered} 1 / 2 \\ 5 / 8 \times 1 / 2 \\ 5 / 8 \times 3 / 4 \end{gathered}$ | $\begin{aligned} & 12 \\ & 123 / 4 \\ & 141 / 2 \end{aligned}$ | Protrygea <br> Prottosi <br> Protules | $\begin{array}{r} \$ 23.00 \\ 27.00 \\ 27.00 \end{array}$ | Protumidos <br> Proturbes <br> Protutela | $\begin{array}{r} \$ 27.00 \\ 31.00 \\ 31.00 \end{array}$ |

One-half dozen in a box.

1931.C.
"MONARCH" FULLER HOSE BIBBS. SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code | Per Dozen. | Code. | Per Dozen. |
|  | $\begin{aligned} & 123 / 4 \\ & 131 / 2 \\ & 151 / 4 \end{aligned}$ | Protzig <br> Protzkette <br> Protznagel | $\begin{array}{r} \$ 26.00 \\ 31.00 \\ 31.00 \end{array}$ | Protzrad <br> Protzring Protzwagen | $\begin{array}{r} \$ 30.00 \\ 35.00 \\ 35.00 \end{array}$ |

One-half dozen in a box.
In Orders and Specifications give Plate Numbers and Sizes.

## TRIMMINGS FOR FULLER WORK.

fancy handles.


Brass, Marked Hot and Cold.
Code
Plate number
Add to price of Cocks, per dozen

†1952-C Short China.
Proudish
$\mathbf{1 9 5 0 - C}$
$\$ 2.00$

$\dagger 1953$-C.
Long China.


China, Marked Hot and Cold.

Proureront Provabile $1953-\mathrm{C} \quad 1954-\mathrm{C}$ $15.00 \quad 15.00$ If wanted separately, without Cocks, add $\$ 4.00$ per dozen to above prices.


1955-C.


195̃6-C.


1957-C.
$\dagger$ ECCENTRICS—1955-C.

| Code Size, i | Provacao 1/2 | Provadura 5/8 | Provanca 3/4 | $\begin{aligned} & \text { Pruvarle } \\ & \mathbf{1} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Per dozen | \$3.00 | 3.00 | 4.00 | 6.00 |

$\dagger$ STEMS AND BALLS-1956-C.


RUBBER BALLS—1957-C.

$\dagger$ RUBBER BALLS (FOR HOT WATER).
Code

| Provender | Provenida | Provento |
| :---: | :---: | :---: |
| $1 / 2$ | $5 / 8$ | $3 / 4$ |
| $\$ 0.75$ | .75 | 1.00 |

Per dozen ................................................................................... $\$ 0.75$. 751.00

Weight per gross, lbs................................................................ 11/2 $23 / 4$
$\dagger$ Carried in San Francisco only.

## COMPRESSION PLAIN BIBBS.



| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 11 | Proxying . | \$14.50 | Prudishly . ..... | \$ 15.00 | Pruegeln ........ | \$17.50 |
| $5581 / 2$ | 141/4 | Proxyship...... |  | Pruefbar ......... | 19.00 | Prueggio........ | 21.50 |
| $5 / 8 \times 3 / 4$ | 15 | Prozent... | 18.00 | Pruefen .......... | 19.00 | Prugnolo ........ | 2150 |
|  | 161/4 | Prozenten... | 23.00 | Prnefling........ | 24.00 | Pruido.......... | 26.50 |
| 1 | 30 | Prude ..... | 42.00 | Pruefstein.. | 46.00 | Pruikenet..... | 49.00 |
| 11/4 | 49 | Prudencial...... |  | Pruefung........ | 73.00 | Pruikerig........ | ......... |
| $11 / 2$ | 54 | Prudencio....... |  | Pruefzeit ........ | 110.00 | Pruimers......... | ......... |

$1 / 2$ to 1 -inch, one half-dozen in a package ; larger than 1 -inch, loose.


| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 11 | Proverbes....... | \$12.50 | Provicaire ...... | \$13.00 | Provinz.......... | \$15.50 |
| $5 / 8 \times 1 / 2$ | $111 / 2$ | Proverbial ...... | \$12.50 | Providebis ...... | 16.00 | Proviseur ....... | 18.50 |
| $5 / 8 \times 3 / 4$ | 12 | Proverbium..... | ........ | Provienes........ | 16.00 | Provisivo........ | 18.50 |
| 3/4 | 16 | Proversum...... | 19.00 | Provient ......... | 20.00 | Provisora....... | 22.50 |
| 1 | 30 | Provianda ...... | 36.00 | Provigner....... | 40.00 | Provistas....... | 43.00 |

One-half dozen in a box.
In Orders and Specifications give Plate Numbers and Sizes.

COMPRESSION HOSE BIBBS.


| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
|  | 12 | Pruinose....... | \$ 16.50 | Prunella ......... | \$17.00 | Prunkhalle...... | \$19.50 |
| $5 / 2 \times 1 / 2$ | 15 | Pruinosos........ | + 20.00 | Prunelles ........ | * 21.00 | Prunkliebe..... | +23.50 |
| $5 / 8 \times 3 / 4$ | 15 | Pruinosum...... | 20.00 | Prunetto ......... | 21.00 | Prunklos ....... | 23.50 |
| 3/4 | 17 | Pruivel .......... | 25.00 | Pruniceum...... | 26.00 | Prunksaal....... | 28.50 |
| 1 | $331 / 2$ | Prullig .......... | 45.00 | Pruniforme..... | 49.00 | Prunkspeil...... | 52.00 |
| $11 / 4$ | 54 | Prumnides...... | 69.00 | Prunkbett ...... |  | Prunksucht .... |  |
| $11 / 2$ | 60 | Prumulace ...... | 104.00 | Prunkend........ |  | Prunktitel....... |  |
| 2 | ... | Pruneaux ....... | 210.00 | Prunkhaft....... |  | Prunkvoll....... |  |



| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | $111 / 2$ | Provocable...... | \$14.50 | Provocolla...... | \$15.00 | Provulgas....... | \$17.50 |
| $5 / 8 \times 1 / 2$ | 14 | Provocamos.... |  | Provolgabo..... |  | Provulgem ...... | ...... |
| $5 / 8 \times 3 / 4$ | $151 / 2$ | Provocante..... | 17.00 | Provolges....... | 18.00 | Prowess......... | 20.50 |
| $3 / 4$ | $161 / 2$ | Provocarlo...... | 21.00 | Provolutos...... | 22.00 | Proxene.......... | 24.50 |
| 1 | 33 | Provocaron..... | 39.00 | Provolvis....... | 43.00 | Proxenos ........ | 46.00 |
| $11 / 4$ | 50 | Provocatif ...... | 61.00 | Provomunt ..... | ...... | Proximal......... | ...... |
| $11 / 2$ | 55 | Provocava ...... | 94.00 | Provoquer....... | ...... | Proximista...... | ...... |
| 2 | ...... | Provoces......... | 190.00 | Provostry......... | ...... | Proximo......... | $\ldots$ |

All on this page $1 / 2$ to 1 -inch, one-half dozen in a box; larger, loose.
In Orders and Specifications give Plate Numbers and Sizes.

COMPRESSION PLAIN BIBBS.

$\dagger$ 1967-C.
SHOULDER FOR IRON PIPE WITH STUFFING BOX.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 12 | Prunkwerk | \$16.00 | Prunulis | \$18.50 |
| 3/4 | 183/4 | Prunophore | 24.00 | Prusianos | 26.50 |
| 1 | 40 | Prunosa | 46.00 | Prusica | 49.00 |

One-half dozen in a box.

† 1968. C.
SCREW ON TAIL FOR IRON PIPE WITH STUFFING BOX.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
|  |  | Prussiates | \$18.00 | Pruttelig | \$20.50 |
| $3 / 4$ | $19 \mathrm{I} / 2$ | Prussique | \$28.00 | Prutzeln | * 30.50 |
| 1 | 41 | Prutenic | 52.00 | Prymnesia | 55.00 |

One-half dozen in a box.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## "MONARCH" COMPRESSION BIBBS.

```
BEST QUALITY RED METAL, HIGHLY POLISHED AND FINISHED. FULL SIZED WATER WAY. RAISED
                AND COUNTER-SUNK SEAT. SQUARE, WELL FITTED
                    THREADS. ARTISTIC DESIGN.
```

                    We Guarantee "Monarch" Bibbs.
    

1971-C.


1972-C.
"MONARCH" COMPRESSION PLAIN BIBBS-I97I-C.
Screw on Tail for Iron Pipe.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | $131 / 2$ | Psacalion................ | \$15.00 | Psadiroma ........... | \$17.50 |
| $5 / 8 \times 1 / 2$ | 141/4 | Psacastes.. ............. | 19.00 | Psalidio .............. | 2L. 50 |
| $5 / 8 \times 3 / 4$ | ...... | Psacum .................. | 19.00 | Psallebet ............. | 21.50 |

One-half dozen in a box.
"MONARCH" COMPRESSION HOSE BIBBS-I 972-C.
Screw on Tail for Iron Pipe.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
|  | 14 | Psallendum..... | \$16.50 | Psallimus ...... | \$17.00 | Psalmata....... | \$19.50 |
| $5 / 8 \times 1 / 2$ | $151 / 2$ | Psallerunt ...... | 20.00 | Psallist ......... | 21.00 | Psalmatis ....... | 23.50 |
| $5 / 3 \times 3 / 4$ |  | Psallette ......... | 20.00 | Psallunt..... | 21.00 | Psalmatum...... | 23.50 |

One-half dozen in a box.

## NICKEL-PLATED BATH BIBBS.

COMPRESSION.


1976-C.
$\dagger$ Screw on Tail for Iron Pipe.

| Code | Psalmboek | Psalmbuch |
| :---: | :---: | :---: |
| Size, inches...................... | 1/2 | 5/8x $3 / 4$ |
| Per dozen....................... | \$21.50 | 26.50 |
| Weight per dozen, lbs........ | 11 | 161/2 |


$\dagger$ Screw on Tail for Iron Pipe with Adjustable Flange.

| Code..................... | Psalmear | Psalmicen | Psalmique |
| :--- | :---: | :---: | :---: |
| Size, inches......... | $5 / 8 \mathrm{x} 1 / 2$ | $5 / 8 \mathrm{x} 3 / 4$ | $3 / 4$ |
| Per dozen........... | $\$ 45.00$ | 45.00 | 56.00 |
| Wtt. per doz., lbs... | $151 / 2$ | 18 | 23 |

## BRASS EXTENSION PIECES.

MALE AND FEMALE I. P. THREADS.


1978-C.
Length, 2 Inches.

Finished.
$\qquad$ Psalmista Psalmistis 1/2 $\quad 3 / 4$
$\$ 6.00 \quad 12.00$
$21 / 4 \quad 3$
$\dagger$ Nickel-Plated.
$\qquad$Psalmodiar

Weight per dozen, lbs...... $21 / 4$

One dozen in a package.
$\dagger$ Carried in San Francisco only.

## TRIMMINGS FOR COMPRESSION WORK.

FANCY HANDLES.



BIBB WASHERS.


1985-C.

BOSS BIBB WASHERS.

| Code | Psammode | Psammodus | Psammures | Psaphis | Psaphon |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $3 / 8$ | 1/2 | 5/8 | 3/4 | 1 |
| Per dozen. | \$0.20 | . 20 | . 20 | . 25 | . 30 |

One hundred in a box.
$\dagger$ VULCANIZED FIBER BIBB WASHERS.

| Code. | Psarani | Psaranos | Psarisome | Psarolite | Psaronio |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $3 / 8$ | 1/2 | 5/8 | $3 / 4$ | 1 |
| Per dozen. | \$0.30 | . 30 | . 30 | . 35 | 40 |

One gross in a box.
$\dagger$ Carried in San Francisco only.

## LEVER BIBBS.

## GROUND KEY. CAST HANDLE.



1990-C.
PLAIN, FOR LEAD PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
|  |  | Psatura .................... | \$13.50 | Pselions ............. | \$15.00 |
| $3 / 8$ | $71 / 2$ | Psautier ................... | \$15.50 | Psellisme ............ | * 17.00 |
| 1/2 | 12 | Pseboa .................... | 18.00 | Psenerus ............ | 20.00 |
| 5/8 | 13 | Psecade ................... | 21.50 | Psephisme........... | 24.00 |
| 3/4 | 16 | Pselafo .................... | 29.00 | Psephite ............. | 32.00 |
| $\dagger 1$ | 26 | Pselchis .................. | 41.00 | Psephobole ......... | 45.00 |

One-half dozen in a package.


PLAIN, SCREWED FOR WOOD.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $1 / 4$ | 4 | Pseques ................... | \$14.50 | Pseudaspis ........ | \$16.00 |
| 3/8 | $71 / 2$ | Psettarum ................ | 16.50 | Pseudehis .......... | 18.00 |
| 1/2 | 12 | Psettis..................... | 20.00 | Pseudelaps ......... | 22.00 |
| 5/8 | 13 | Pseudanthe .............. | 24.50 | Pseuderyx ........... | 27.00 |
| $3 / 4$ | 16 | Pseudarade ...... ........ | 33.00 | Pseudiosma......... | 36.00 |

One-half dozen in a package.
$\dagger$ Carried in San Francisco only.

## LEVER PLAIN BIBBS.

GROUND KEY. CAST HANDLE.



SCREW ON TAIL FOR IRON PIPE—I992-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
|  |  | Pseudocato ..... | \$....... | Pseudopape..... | \$14.50 | Pseutes ........... | \$16.00 |
| $3 / 8$ | $71 / 2$ | Pseudodox..... | 15.00 | Pseudopata .... | +16.50 | Psiadia .......... | 18.00 |
| 1/2 | $121 / 2$ | Pseudogyne.... | 18.00 | Pseudopsis...... | 20.00 | Psiathium...... | 22.00 |
| $\dagger 5 / 8 \times 1 / 2$ | $131 / 2$ | Pseudolien...... | 22.00 | Pseudornis..... | 24.50 | Psiche ............ | 27.00 |
| 5/8×3/4 | 14 | Pseudology..... | 22.00 | Pseudosmia..... | 24.50 | Psichico......... | 27.00 |
| 3/4 | 16 | Pseudome....... | 30.00 | Pseudova........ | 33.00 | Psichine ......... | 36.00 |
| $\dagger 1$ | $271 / 2$ | Pseudomeno.... | 43.00 | Pseudovum..... | 47.00 | Psidium.......... | 51.00 |
| † 11/4 | 46 | Pseudomops ... | ........ | Pseudozene ..... | 78.00 | Psilagie.......... | 88.00 |

One-half dozen in a package.

WITH SHOULDER FOR IRON PIPE-I993-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| $1 / 4$ | 4 | Psilarum........ | \$....... | Psilopogon...... | \$13.50 | Psoadic.......... | \$15.00 |
| $3 / 8$ | 7 | Psiletes ........... | 14.00 | Psiloptere....... | 15.50 | Psodymes........ | 17.00 |
| 1/2 | 12 | Psilobon ......... | 16.00 | Psilosomes...... | 18.00 | Psomeles... ..... | 20.00 |
| $5 / 8 \times 1 / 2$ | 13 | Psiloceres...... | 19.00 | Psilostome...... | 21.50 | Psophides....... | 24.00 |
| $5 / 8 \times 3 / 4$ | 15 | Psilomydes ..... | 19.00 | Psilothre........ | 21.50 | Psophis......... | 24.00 |
| 3/4 | 16 | Psilonotes ...... | 26.00 | Psilothris........ | 29.00 | Psychical ....... | 32.00 |
| 1 | 26 | Psilopes......... | 37.00 | Psilothron ...... | 41.00 | Psychicos..... .. | 45.00 |
| 11/4 | 44 | Psilopiles........ | 60.00 | Psilothrum...... | 70.00 | Psychicum...... | ........ |
| $11 / 2$ | 50 | Psilopodes...... | 90.00 | Psilures.......... | 110.00 | Psychology ..... | ........ |
| 2 | 53 | Psilopofar....... | 180.00 | Psimithia ........ | 210.00 | Psychosis.. ..... | ........ |

$1 / 4$-inch to 1 -inch, one-half dozen in a package.

[^29]
## LEVER HOSE BIBBS.

## GROUND KEY. CAST HANDLE.


$1 / 2$-inch to 1 -inch, one-half dozen in a box.


| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
|  | 12 | Publicaron...... | \$18.00 | Publicness ...... | \$20.00 | Publicurs ........ | \$22.00 |
| $5 / 8 \times 3 / 4$ | 151/2 | Publiciano ...... | 21.00 | Publicola ........ | \$23.50 | Publikum ....... | 26.00 |
|  | 16 | Publicista....... | 29.00 | Publicorum .... | 32.00 | Publipor ......... | 35.00 |
| 1 | $241 / 2$ | Publicitus ...... | 42.00 | Publierons, ..... | 46.00 | Publiporem .... | 50.00 |

One-half dozen in a package.
$\dagger$ Carried in San Francisco only.

## LEVER WASH TRAY BIBBS.

GROUND KEY. CAST HANDLE.

$\dagger$ 1998-C.
Cut Shows Right Hand.
WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $3 / 8$ | $81 / 2$ | Publiporis............ | \$17.00 | Pucelles............... | \$18.50 |
| 1/2 | $111 / 2$ | Publique.............. | 22.00 | Puchapat .............. | 24.00 |
| $5 / 8 \times 1 / 2$ | 13 | Pucarinha............ | 27.00 | Puchar ................ | 29.50 |
| $5 / 8 \times 3 / 4$ | 15 | Pucaro ................ | 27.00 | Pucheras.............. | 29.50 |
| $3 / 4$ | 18 | Puccoon............... | 37.00 | Pucheux .............. | 40.00 |

One each Right and Left Hand always sent unless otherwise specified.
One-half dozen in a box.

FULLER WASH TRAY BIBBS.


1999-C.
Cut Shows Right Hand.
WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | $121 / 2$ | Puchoir................ | \$25.00 | Puddelst .............. | \$29.00 |
| $\dagger 5 / 8 \mathrm{x}$ 1/2 | $121 / 2$ | Puckered.............. | 30.00 | Puddlage ............. | 34.00 |
| $5 / 8 \times 3 / 4$ | $131 / 2$ | Puckering............ | 30.00 | Puddleurs............. | 34.00 |
| $3 / 4$ | 18 | Puddeln............... | 38.00 | Pudebunt............. | 44.00 |

One each Right and Left Hand always sent unless otherwise specified.
One-half dozen in a box.
$\dagger$ Carried in San Francisco only.

## COMPRESSION WASH TRAY BIBBS.



STRAIGHT PATTERN WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 10 | Pudefactos........... | \$16.00 | Pudelnass ............ | \$18.50 |
| +5/8×1/2 | $121 / 2$ | Pudefactum.......... | 20.00 | Pudendous........... | 22.50 |
| $5 / 8 \times 3 / 4$ | 14 | Pudelhund........... | 20.00 | Puderig............... | 22.50 |
| $3 / 4$ | $16^{1 / 2}$ | Pudelkopf............ | 25.00 | Pudescit .............. | 27.50 |


$\dagger$ 2001. C .
Cut shows Right Hand.

$+2002 . \mathrm{C}$.
Cut shows Right Hand.

SIDE HANDLE PATTERN WITH SCREW ON TAIL FOR IRON PIPE-2001-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 10 | Pudeur ............... | \$18.00 | Pudibondas.......... | \$20.50 |
| +5/8x ${ }^{1 / 2}$ | 13 | Pudibile............... | 22.00 | Pudibundo........... | 24.50 |
| $5 / 8 \times 3 / 4$ | $141 / 2$ | Pudibilis.............. | 22.00 | Pudique............... | 24.50 |
| $3 / 4$ | $171 / 2$ | Pudibond............. | 27.00 | Pudleaba .............. | 29.50 |

One each Right and Left Hand always sent unless otherwise specified.

SIDE HANDLE PATTERN WITH SHOULDER FOR IRON PIPE-2002-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | $91 / 2$ | Pudleador............ | \$16.00 | Pudlearian........... | \$18.50 |
| 5/8x3/4 | $121 / 2$ | Pudleamos........... | 19.00 | Pudleos............... | 21.50 |

One each Right and Left Hand always sent unless otherwise specified.
All this page, one-half dozen in a box.
$\dagger$ Carried in San Francisco only.

## "MONARCH" COMPRESSION WASH TRAY BIBBS.

BEST QUALITY RED METAL. HIGHLY POLISHED AND FINISHED. RAISED AND COUNTER-SUNK SEAT FULL SIZED WATERWAY. SQUARE, WELL-FITTING THREADS. ARTISTIC DESIGN. TESTED AND GUARANTEED.


2005-C.
STRAIGHT PATTERN WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 12 | Pudoratos .. ............. | \$16.00 | Pudorosas ........... | \$18.50 |
| 5/8 $\times 3 / 4$ | $131 / 2$ | Pudoratum ............... | 20.00 | Pudrian ............. | 22.50 |

One-half dozen in a box.

## "MONARCH" FULLER WASH TRAY BIBBS.



2006-C.
Cut Shows Right Hand.
WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $\begin{gathered} 1 / 2 \\ 5 / 8 \times 3 / 4 \end{gathered}$ | .......... | Pudridero ................ Puellasco ............... | $\begin{array}{r} \$ 25.00 \\ 30.00 \end{array}$ | Puellitor............. Puellum ............ | $\begin{array}{r} \$ 29.00 \\ 34.00 \end{array}$ |

One each Right and Left Hand always sent unless otherwise specified.
One-half dozen in a box.
In Orders and Specifications give Plate Numbers and Sizes.

## DOHERTY SELF-CLOSING BIBBS. <br>  <br> PLAIN WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $\begin{gathered} 1 / 2 \\ 5 / 8 \times 3 / 4 \end{gathered}$ | $\begin{aligned} & 13^{1 / 2} \\ & 16^{1 / 2} \end{aligned}$ | Puentes ............... Puerasco ............ | $\begin{array}{r} \$ 29.00 \\ 33.00 \end{array}$ | Puerascunt............ <br> Puerculos. | $\begin{array}{r} \$ 35.00 \\ 39.00 \end{array}$ |

One-half dozen in a package.
MOORE'S SELF-CLOSING BIBBS.


2012-C.

†2011.C.

PLAIN WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 13 | Puerility. ....... ..... | \$29.00 | Pueriliser............. | \$35.00 |
| 5/8x3/4 | 17 | Puerilium ............ | 33.00 | Puerilizam ........... | 39.00 |

One-half dozen in a box.
The above sectional cut illustrates the construction of Moore's Self-Closing Work. A peculiarity of this work is that the spring is operated both by Tension and Torsion, thus having a double power to close the valve to its seat.
$\dagger$ Carried in San Francisco only.

## TELEGRAPH SELF-CLOSING BIBBS.



PLAIN WITH SCREW ON TAIL FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $3 / 8$ | 10 | Puffender | \$....... | Puffwagen | \$21.00 |
| 1/2 | $11 \mathrm{t} / 2$ | Puffery | 20.00 | Puflerite | 24.00 |
| $5 / 8 \times 1 / 2$ | 15 | Puffingly | 24.00 | Puggi | 28.00 |
| $5 / 8 \times 3 / 4$ | 16 | Puffinure | 24.00 | Pugilabor | 28.00 |
| 3/4 | $16^{1 / 2}$ | Puffspiel | 32.00 | Pugilamur | 38.00 |

One-half dozen in a package.

$\dagger$ Carried in San Francisco only.

## PUSH AND PULL VALVES.



## HOPPER VALVES.

FOR LEAD AND IRON PIPE WITH COUPLING, AND FINISHED FLANGE AND HANDLE.

Code.
Size, inch. Pugillator

Per dozen 1/2

Weight per dozen, lbs.

$$
\$ 30.00
$$

> Loose.

$\dagger 2021 \cdot \mathrm{C}$.
$\dagger$ Carried in San Francisco only.

In Orders and Specifications give Plate Numbers.

## RACKING COCKS.

GROUND KEY. NUT AND WASHER. FINISHED BRASS.


$\dagger 2025-\mathrm{C}$.
To Drive.

$\dagger 2026$ - .
To Screw.

RACKING COCKS TO DRIVE-2025-C.

| Code | Pugille | Pugillum | Pugionem | Pugionies | nabilis |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/4 | 3/8 | 1/2 | 5/8 | 3/4 |
| Per dozen.. | \$10.00 | 12.00 | 15.00 | 20.00 | 29.00 |
| Weight per dozen, lbs | 3 | 6 | 8 | 11 | $121 / 2$ |

RACKING COCKS TO SCREW-2026-C.

| Code | Pugnacious | Pugnacite | Pugnacula | Pugnalando | ssi |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/4 | 3/8 | 1/2 | 5/8 | 3/4 |
| Per dozen | \$10.50 | 12.50 | 16.00 | 21.50 | 31.00 |
| Weight per dozen, 1 | 3 | 6 | 8 | 11 | $12^{1 / 2}$ |

One-half dozen in a box.

## LOCK COCKS.

GROUND KEY. NUT AND WASHER. FINISHED BRASS.

$\dagger 2027$ C.
To Drive.

$\dagger 2028$-C.
To Screw.

LOCK COCKS TO DRIVE-2027-C.

| Code.. | Pugnalato | Pugnalone | Pugnalotto | Pugnassi |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | $3 / 8$ | 1/2 | 5/8 | 3/4 |
| Per dozen .......................................................... | \$14.00 | 17.00 | 22.00 | 31.00 |
| Weight per dozen, lbs.. | $51 / 2$ | 8 | 10 | 15 |

LOCK COCKS TO SCREW-2028-C.


One-half dozen in a package.
†Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## URN COCKS.

NICKEL-PLATED. GROUND KEY.


2031-C.
RUBBER TEE HANDLE.

| Code $\ldots \ldots \ldots \ldots \ldots .$. | Pugnazzo | Pugnello | Pugniamo |
| :--- | :---: | :---: | :---: |
| Size, inches................... | $1 / 8$ | $1 / 2$ |  |
| Per dozen............ $\$ 14.00$ | 16.00 | 22.50 |  |
| Weight perdoz., lbs. | 4 | $51 / 2$ | 9 |

One-half dozen in a box.

## COMPRESSION OIL COCKS.

IRON TIN-PLATED.



2032-C. IVORY DROP HANDLE.

Code
Size, inches
Pugnitivo
Per dozen
$3 / 8$

Weight per dozen, lbs........................ 5
One-half dozen in a box.


2033-C.
With Flange to Solder.


SIDE HANDLE WITH WOOD BAR.

| Size, Inches. | Weight.Per <br> Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | ....... | Puissance............. | \$30.00 | Pujamiento.......... | \$33.50 |
| 5/8 |  | Puissant ............... | 34.00 | Pujanca. ............. | +37.50 |
| $3 / 4$ | $91 / 2$ | Pujadores............. | 43.00 | Pujante................ | 47.00 |

One-half dozen in a package.
These Cocks may be readily cleaned by removing the cap on the end, thus opening a passage through the entire body of the cock.

In Orders and Specifications give Plate Numbers and Sizes.

## AIR COCKS.



Threaded one end for Iron Pipe.
Code
 Pujarais Pujaremos Pujavante Pulcelaje Size, inches.. Each. $\qquad$
1/8
$\$ 0.40$
$1 / 4$
.40
. 50
Wt. pər doz., lbs. $\qquad$

POLISHED BRASS.


Threaded both ends for Iron Pipe.

| Code.......... | Pulcella | Pulcellum | Pulchello | Pulchellus |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | $1 / 8$ | $1 / 4$ | $3 / 8$ | $1 / 2$ |
| Each......... $\$ 0.55$ | .55 | .65 | .90 |  |
| Wt. per doz., lbs. | $\ldots \ldots$. | $\ldots \ldots$. | $\ldots \ldots$. | $\ldots \ldots$ |

One dozen in a box.

## AIR VALVES.

## BRASS POLISHED AND NICKEL-PLATED.


$\dagger 2041 . \mathrm{C}$.

Lock Shield Automatic Air Valve for Steam. Has a special key for adjusting the valve. Threaded for $1 / 8$-inch pipe.

Code.
Number.
Pulchresco
Each 6Weight per box, lbs.$\$ 2.00$$3^{1 / 2}$

Twelve in a box. $\dagger$ Carried in San Francisco only.

BADGE.

+2042-C.

Perfected Duplex Air Valves carry the above trade mark and are guaranteed for five years. Will not leak water or steam. The only brand of Air Valves having a separate air tube (an essential feature) extending from the interior of the radiator to above the top of the float on inside of valves, which equalizes the pressure and causes the water to flow back into the radiator instead of on the floors and carpets.

Automatic Float and Expansion Air Valve.
A cheap, but well made valve. Threaded for 1/8-inch pipe.

| Code | Pulchrita |
| :---: | :---: |
| Each. | \$1.00 |

$$
\text { Weight per box, lbs......................... } 21 / 2
$$

## LEVER BALL COCKS.

GROUND KEY. NUT AND WASHER.



2055-C.
With Shoulder for Iron Pipe.


2056-C.
Screw on Tail for Iron Pipe.
† WITH SHOULDER FOR IRON PIPE-2055-C.

| Code. Size, inches | $\begin{gathered} \text { Pulcino } \\ 3 / 8 \end{gathered}$ | Pulcras 1/2 | Pulejatos 5/8x $3 / 4$ | $\underset{\substack{\text { Pulejatum } \\ 3 / 4}}{ }$ | $\stackrel{\text { Pulejum }}{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen . | \$18.00 | 20.00 | 25.00 | 33.00 | 47.00 |
| Weight per dozen, lbs................................. .... | 6 | $91 / 2$ | 12 | 14 | 26 |

WITH SCREW ON TAIL FOR IRON PIPE-2056-C.

| Code $\qquad$ Size, inches. | Pulendo $\dagger 3 / 8$ | $\begin{gathered} \text { Pulgada } \\ 1 / 2 \end{gathered}$ | Pulgones 5/8×3/4 | $\begin{gathered} \text { Pulgosas } \\ 3 / 4 \end{gathered}$ | $\underset{1}{\text { Pulguenta }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen | \$19.00 | 22.00 | 28.00 | 37.00 | 53.00 |
| Weight per dozen, lbs. | 6 | 9 | 12 | 14 | 26 |

## IMPROVED COMPRESSION BALL COCKS.

## WITH STEMS AND SPUDS.



2057 C.
WITH SCREW ON TAIL FOR IRON PIPE.

| Code....... Size, inches | $\underset{\substack{\text { Pulguillas } \\ 1 / 2}}{ }$ | $\underset{3 / 4}{\text { Puliamos }}$ | $\begin{gathered} \text { Pulicibus } \\ 1 \end{gathered}$ | Pulicide $\dagger 1$ 1/4 | Pulicosum $\dagger 11 / 2$ | Pulidez $\dagger 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen | \$16.00 | 28.00 | 42.00 | 68.00 | 100.00 | 190.00 |
| Weight p | 10 | 14 | 18 | 38 | 50 | 100 |

$1 / 2$-inch to 1 -inch inclusive have stems 10 inches long, thread $7 / 16$-inch, 20 threads to the inch. $11 / 4$-inch to 2 -inch inclusive have stems 12 inches long, $1 / 8$-inch Iron Pipe.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## "FOSTER" PATENT BALL COCK OR FLOAT VALVE.

BRASS. HIGH AND LOW PRESSURE.

Used in receiving and supply tanks, or wherever the flow of water is to be controlled automatically. No springs.

Pressures varying from 5 to 250 lbs . per square inch are successfully controlled by the "Foster"" Ball Cock. A 4-inch Ball is sufficiently large to operate the largest sizes made, as it is only used to open or close the auxiliary valve.

Positive in action. Works easily aud noiselessly.
A strainer keeps out sediment. Corrugations on the little wheel at the side hold the ball rod firmly at any angle-you don't have to bend the rod.

A variation of but half an inch in the water level will cause the valve to open full or close.
How they operate: When both the main valve and auxiliary valve are closed, the pressure in the upper part of the valve chamber is substantially the same as in the inlet pipe.

If the auxiliary valve be opened by falling of the float or any other means, the pressure in the upper part of the valve chamber is at once relieved and reduced below the pressure in the inlet pipe.

The difference in the pressure on the upper side of the piston and the under side of the piston, causes the piston to be lifted to its highest position in the valve chamber, thus opening the main valve.

When the auxiliary valve is closed by the rising of the float or any other means, the water is forced into the upper part of the valve chamber, between the piston and body of the valve, until the pressures in the two parts of the valve chamber are equalized.

Then the piston is caused to move in the opposite direction and the valve is closed.

†2061-C.

FOR IRON PIPE.

†Carried in San Francisco only.

## COMPRESSION STOPS.


$\dagger 2070 . \mathrm{C}$.
Straight for Lead and Iron Pipe.


Straight for Iron Pipe.
†FOR LEAD AND IRON PIPE-2070-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 11 | Pullabunt........ | \$13.50 | Pullaminis ...... | \$14.00 | Pullanen ......... | \$16.50 |
| 3/4 | 16 | Pullamina....... | 23.00 | Pullaminum.... | 24.00 | Pullario ......... | 26.50 |

One-half dozen in a box.
FOR IRON PIPE-207I-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| $3 / 8$ | $71 / 2$ | Pullastre......... | \$........ | Pullavit.......... | \$......... | Pullicat .......... | $\dagger \$ 15.00$ |
| 1/2 | 9 | Pullastris........ | $\dagger 13.50$ | Pullback ... ..... | 14.00 | Pullicenos...... | 16.50 |
| $1^{3 / 4}$ | 17 | Pullatione....... | $\dagger 23.00$ | Pullebroer ...... | $\dagger 24.00$ | Pullicenum..... | 26.50 |
| 1 | $261 / 2$ | Pullavamus.... |  | Pullejaceo....... | $\dagger 43.00$ | Pulliginis........ | $+46.00$ |

One-half dozen in a box.

$\dagger 2072 . \mathrm{C}$.
For Iron Pipe, With Adjustable Flange.
$\dagger$ Carried in San Francisco only.
"MONARCH" COMPRESSION ANGLE STOPS.

```
BEST QUALITY RED METAL. HIGHLY POLISHED AND FINISHED. SQUARE, WELL-FITTED THREADS. ARTISTIC DESIGN.
```

We Guarantee " Monarch " Goods.

$2075-C^{\prime}$.
FINISHED FOR IRON PIPE.

Code.
Size, inches
Per dozen 5/8x3/4

Weight, per dozen, lbs.
$\$ 17.00$


2076-C.
ONE END IRON PIPE, ONE END SLIP JOINT.

11/1 6 -inch slip takes $3 / 8$-inch I. P.
One-half dozen in a box.

## LOOSE KEY COMPRESSION STOPS.

STRAIGHT FOR IRON PIPE.
Finished.

| Code | Puilulos | Pullulum |
| :---: | :---: | :---: |
| Size, inches | 1/2 | 3/4 |
| Per dozen. | \$20.00 | 31.00 |
| Weight, per dozen, lbs...... | 11 | 16 |

Nickel-Plated.

$\dagger$ Carried in San Francisco only.

$\dagger 2080 . \mathrm{C}$.

## DOHERTY SELF-CLOSING STOPS. <br>  <br> $\dagger 2085$ - . <br> FOR IRON PIPE.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $\begin{gathered} 1 / 2 \\ 5 / 3 \times 3 / 4 \end{gathered}$ | $\begin{aligned} & 131 / 2 \\ & 16^{1 / 2} \end{aligned}$ | Pulmonelle. $\qquad$ <br> Pulmoneum $\qquad$ | $\begin{array}{r} \$ 30.00 \\ 33.00 \end{array}$ | Pulmonico <br> Pulmonifer | $\begin{array}{r} \$ 36.00 \\ 39.00 \end{array}$ |

One-half dozen in a box.

## MOORE'S SELF-CLOSING STOPS.


†2086-C.
FOR IRON PIPE

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 13 | Pulpabat.............. | \$30.00 | Pulpation ............. | \$36.00 |
| $3 / 4$ | 24 | Pulparemus.......... | 42.00 | Pulparerat ........... | 49.00 |

One-half dozen in a box.
See page 515 for construction of Moore's self-closing work.
tCarried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## LEVER STOPS.

GROUND KEY. CAST HANDLES. NUT AND WASHER.


†FOR LEAD PIPE—2089-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $3 / 8$ | $61 / 2$ | Pulpemus............. | \$18.50 | Pulpitamus .......... | \$20.00 |
| 1/2 | 10 | Pulpeux............... | 21.00 | Pulpiter............... | 23.00 |
| 5/8 | 14 | Pulpitabo .............. | 27.00 | Pulpitical.............. | 29.50 |

One-half dozen in a box.


For Lead and Iron Pipe.
†FOR LEAD AND IRON PIPE-2090-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. |
| $\begin{aligned} & 1 / 2 \\ & 3 / 4 \end{aligned}$ | $\begin{aligned} & 12 \\ & 15 \end{aligned}$ | Pulpiting <br> Pulpitista | $\begin{array}{r} \$ 21.00 \\ 32.00 \end{array}$ | Pulpitorum $\qquad$ <br> Pulpo $\qquad$ | $\begin{array}{r} \$ 23.00 \\ 34.50 \end{array}$ |

One-half dozen in a box.
$\dagger$ Carried in San Francisco only.

## LEVER STOPS.

GROUND KEY. CAST HANDLES. NUT AND WASHER.


2091-C.
For Iron Pipe.
FOR IRON PIPE-209I-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| $3 / 8$ | $61 / 2$ | Pulpolique ...... | $\dagger \$ 15.00$ | Pultabant........ | $\dagger \$ 18.50$ | Pultifago......... | $\dagger \$ 20.00$ |
| 1/2 | 10 | Pulseless........ | $\dagger 17.00$ | Pultaceous ...... | 21.00 | Pultifagus....... | 23.00 |
| $5 / 8 \times 3 / 4$ | 14 | Pulsific........... | 22.00 | Pultarium........ | $\dagger 27.00$ | Pultificos........ | 29.50 |
| $3 / 4$ | $161 / 2$ | Pulsiloge........ | $\dagger 26.00$ | Pultenee ......... | 32.00 | Pultiphage...... | $\dagger 34.50$ |
| 1 | 24 | Pulsimeter ...... | $\dagger 38.00$ | Pultibus........ | ...... | Pultium.......... | ...... |
| $11 / 4$ | 36 | Pulsiones ........ | +60.00 | Pulticula......... | ...... | Pultlampe....... | ...... |
| $11 / 2$ | 48 | Pulsuram ........ | $\dagger 90.00$ | Pulticulis ........ | ...... | Pultsitz ........... | ...... |

One-half dozen in a box.

$\dagger 2092$ - C .
For Iron Pipe with Waste.
†FOR IRON PIPE WITH WASTE-2092-C.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough. |  | Finished. |  | Nickel-Plated, |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 3/8 | $81 / 2$ | Pululaba ......... | \$17.00 | Pulver .......... | \$20.50 | Pulverholz ...... | \$22.00 |
| 1/2 | 11 | Pululamos ...... | \$19.00 | Pulverable..... | 23.00 | Pulverhorn...... | 25.00 |
| $5 / 8 \times 3 / 4$ | $131 / 2$ | Pululando....... | 24.00 | Pulverdamp.... | 29.00 | Pulverig ......... | 31.50 |
|  | 18 | Pulularon........ | 28.00 | Pulverfass....... | 34.00 | Pulverino....... | 36.50 |
| 1 | $251 / 2$ | Pululeis.......... | 41.00 | Pulvergang..... | ... | Pulverise....... | 53.00 |

One-half dozen in a box.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## LEVER SHOWER STOPS.

GROUND KEY. ROUGH BODY WITH FLANGE AND HANDLE.

$\dagger 2095-\mathrm{C}$.
FOR IRON PIPE WITH WASTE.

"MONARCH" COMBINATION STOP AND WASTE.
GROUND KEY. NUT AND WASHER. RIGHT OR LEFT HAND WITH INTERCHANGEABLE HANDLE. MADE OF RED METAL. GUARANTEED TIGHT. TESTED 250 POUNDS PRESSURE.


2096-C.
FLAT WAY FOR IRON PIPE WITH WASTE.

| Rough Tee Handle. |  |  |  | Rough Lever Handle. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code. | Pulvicules | Pulvifere | Pulvilled | Code.................... Pulvillo | Pulvinatum | Pulvinorum |
| Size, inches ........... | 1/2 | $\dagger 5 / 8 \times 3 / 4$ | 3/4 | Size, inches........... $\dagger 1 / 2$ | $\dagger 5 / 8 \times 3 / 4$ | †3/4 |
| Per dozen.............. | \$19.00 | 24.00 | 28.00 | Per Dozen ............ $\$ 19.00$ | 24.00 | 28.00 |
| Weight per doz.,lbs. | 15 | $171 / 2$ | $211 / 2$ | Weight perdoz.,lbs. 15 | 18 | $221 / 2$ |
| One-half dozen in a box. |  |  |  |  |  |  |

†Carried in San Francisco only.

## TEE HANDLE STOPS.

## GROUND KEY. NUT AND WASHER.



ROUGH FLATWAY FOR IRON PIPE WITH STOP AND WASTE.


One-half dozen in a package.

## "H" PATTERN TEE HANDLE STOPS.

GROUND KEY. NUT AND WASHER.

$\dagger 2102$ - .
ROUGH ROUNDWAY FOR IRON PIPE.
Code
Size, inches........................

| $\substack{\text { Pumicabar } \\ 1 / 2}$ | Pumicabunt <br> $3 / 4$ <br> $\$ 18.00$ |
| :---: | :---: |
| 12 | 26.50 |
| 12 | 18 |

One-half dozen in a box.

ROUGH ROUNDWAY FOR IRON PIPE WITH WASTE.

| Code. | Pumicamus | Pumicate |
| :---: | :---: | :---: |
| Size, inches................... | 1/2 | 3/4 |
| Per dozen | \$20.00 | 28.50 |
| Weight per dozen, lbs.... | 12 | 18 |

Pumicamus $1 / 2$ /4 28.50 18


## BRASS GAS SERVICE COCKS.

| Code, Flat Head.. | Pumicose |
| :---: | :---: |
| Code, Square Head. | Punaisot |
| Size, inches. | 1/8 |
| Each. | \$0.75 |
| Weight each, lbs. |  |
| Code, Flat Head.. |  |
| Code, Square Head. |  |
| Size, inches |  |
| Each . |  |
| Weight each, lbs... |  |


| Pummace | Pumpee | Pumpenro | Pumpensat | Pumphake |
| :---: | :---: | :---: | :---: | :---: |
| Puncante | Punccao | Punchayot | Punchions | Puncta |
| $1 / 4$ | $3 / 8$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ |
| .75 | .85 | .95 | 1.15 | 1.50 |
| $3 / 8$ | $1 / 2$ | $5 / 8$ | 1 | $13 / 4$ |
| Pumphose | Pumpkin | Pumpsatt | Pumpwerk | Punados |
| Punctiform | Punctilio | Punctillis | Punctio | Punctoar |
| $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ | $\mathbf{2} 1 / 2$ | $\mathbf{3}$ |
| $\$ 2.25$ | 3.10 | 5.00 | 11.00 | 16.00 |
| $21 / 2$ | $21 / 8$ | $53 / 4$ | $91 / 8$ | $143 / 4$ |

Square Head Service Cocks will be sent unless otherwise specified.

## BRASS STEAM SERVICE COCKS.

Code, Flat Head
Code, Square Head
Size, inches.
Each.
Weight each, lbs
Code, Flat Head.
Code, Square Head
Size, inches
Each
Weight each, lbs

..................... Puncturos
$\qquad$ Pungisteis 1/8
$\$ 0.85$
$\qquad$
$\qquad$ $\$ 0.85$
$\ldots . .$.

STANDARD.

+2113-C.
Square Head.

| Pundib P | Pundonor P | Punendeli | Punetazos | Pungamos | Pungeba |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pungled | $\begin{gathered} \text { Pungolassi } \\ 3 / 8 \end{gathered}$ | Pungolato | $\begin{gathered} \text { Punhado } \\ 3 / 4 \end{gathered}$ | Punhetes 1 | Punian |
| 85 | 1.00 | 1.25 | 1.70 | 2.35 | 3.70 |
|  |  |  |  |  |  |
| Pungently | y Pungetto | Pungidor | Pungimos | Pungir | Pungira |
| Punibile $11 / 2$ | $\begin{gathered} \text { Punicanos } \\ \mathbf{2} \end{gathered}$ | $\underset{\mathbf{2} 1 / 2}{ }$ | $\begin{aligned} & \text { Punigione } \\ & 3 \end{aligned}$ | $\begin{aligned} & \text { Puniness } \\ & \mathbf{3} 1 / 2 \end{aligned}$ | $\begin{gathered} \text { Puniriar } \\ \mathbf{4} \end{gathered}$ |
| \$4.85 | 7.30 | 14.50 | 22.50 | 38.50 | 50.00 |
|  | 2 |  |  |  |  |

Square Head Service Cocks will be sent unless otherwise ordered.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## BRASS STEAM SERVICE COCKS.

EXTRA HEAVY.

Code, Flat Head.
....
Code, Square Head
Size, inches.............
$\qquad$

| Punitivo | Punitoris |
| :---: | :---: |
| Puntadores | Puntaglia |
| $1 / 4$ | $3 / 8$ |


| Punivano | Punivimus | Punjum | Punkahs |
| :---: | :---: | :---: | :---: |
| Puntal | Puntapie | Puntarla | Puntboor |
| $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ |
| 2.00 | 2.85 | 4.00 | 6.75 |
| $\cdots \cdots$ | $\cdots \cdots$ | $\cdots \cdots$ | $\cdots \cdots$ |
| Punschglas | Punschlied | Punster | Puntachtig |
| Punteggia | Puntellano | Puntellare | Punteloos |
| $\mathbf{2} 1 / 2$ | $\mathbf{3}$ | $\mathbf{3} 1 / 2$ | $\mathbf{4}$ |
| 25.00 | 37.00 | 54.00 | $\mathbf{7 5 . 0 0}$ |

Weight each, lbs $\qquad$ $\$ 1.30$ 1.50
Punktum
Punorum Puntdicht 2
25.00
37.00
54.00
75.00
Weight each, lbs

Square Head Service Cocks will be sent unless otherwise ordered.

## IRON SERVICE COCKS.



ALL IRON. STANDARD. SCREWED.

Code $\qquad$ Punterola Punthaak Punthaken Punthoed Puntiamol Inches $\qquad$ $1 / 2 \quad 3 /$ 3/4 1 1 1/2 Each .................. $\$ 0.90$ 1.05 1.30 1.60 1.95
Weight each, lbs.
..
......

Code Puntiglio Puntillazo Puntillero Puntolino Puntosas Inches........................ 2
$\$ 2.70$ $21 / 2$
3
$31 / 2$
4
Each
4.40
6.75
12.00
15.50

Weight each, lbs...

## $\dagger 2120-\mathrm{C}$.

The illustration sets forth quite clearly improvements made in Standard Iron Cocks wherein added strength, an opening full area of pipe, and, on account of the large plug and body, an increased bearing affording a tight seal under excessive pressures, are obtained.
$\dagger$ Carried in San Francisco only.

## CHABOT COCKS.

BRASS. FLAT HEAD.



SCREWED OUTSIDE FOR IRON PIPE.

| Code Size, inches | Puntrede 1/2 | $\begin{gathered} \text { Puntuadas } \\ 3 / 4 \end{gathered}$ | $\begin{aligned} & \text { Puntuale } \\ & 1 \end{aligned}$ | $\begin{gathered} \text { Puntualizo } \\ 11 / 4 \end{gathered}$ | $\begin{aligned} & \text { Puntuamos } \\ & 11 / 2 \end{aligned}$ | Puntuaron |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$16.20 | 28.80 | 46.20 | 93.60 | 124.80 | 208.80 |
| Weight per dozen, lbs |  |  |  |  |  |  |



JEFFRESS' COCKS.

BRASS. FLAT HEAD. WITH STOP AND WASTE.

Code.
Punturetta
Puntuto
Size, inches
Per dozen
$\$ 19.00$
28.00

Weight per dozen, lbs.
9
$131 / 2$
Loose.


METER COCKS.

BRASS. FLAT HEAD.


Each
Weight each, lbs
Loose.
$\dagger$ Carried in San Francisco only.

## CORPORATION COCKS.



Standard Pattern.
Both Ends Threaded Outside for I. P.

## STANDARD CORPORATION COCKS-2135-C.

| Code.. | Punzadura | Punzaria | Punzecchia | Punzello | Punzione | Punzoneria |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ | 2 |
| Per dozen. | \$16.20 | 28.80 | 46.20 | 93.60 | 124.80 | 208.80 |
| Weight per dozen, lbs..................... | 12 | 19 | 27 | ... | ... | ... |

## †"MUELLER" CORPORATION COCKS-2I36-C.

| Code | Punzones | Pupalies | Puparial |
| :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 |
| Each. | \$1.35 | 2.40 | 3.85 |
| Weight each, lbs... | ... | ... | ... |


$\dagger 2137 . \mathrm{C}$.
For Payne's Tapping Machine.
Male for Iron Pipe.

2137.C.

Showing Opposite End of Payne's Corporation Cock.

PAYNE'S PATENT CORPORATION COCKS-2 I37-C.

| Code | Puparzia | Pupilage | Pupilares | Pupilary | Pupillar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ |
| Per dozen. | \$12.00 | 23.00 | 36.00 | 80.00 | 100.00 |
| Weight per dozen, lbs. |  | 12 |  |  |  |

Any of above corporation cocks can be furnished with straight or bent couplings for lead pipe. Prices upon application.

We can furnish Corporation Cocks for any make of tapping machine and any style desired.
$\dagger$ Carried in San Francisco only.

## GARDEN HOSE VALVES.


$\dagger$ STRAIGHT GARDEN VALVES-2146-C.

| Code $\qquad$ Size, inches. | Puposa 1/2 | Puppenhaft 3/4 | $\begin{aligned} & \text { Puppenkopf } \\ & \quad 1 \end{aligned}$ | Puppenkram $11 / 4$ | Puppentand $11 / 2$ | Puppetish $2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$1.65 | 1.65 | 2.20 | 3.40 | 4.75 | 7.00 |
| Weight each, lbs... | 1 | $11 / 4$ | 13/4 | 3 | $41 / 2$ | 6 |

$1 / 2$ to 1 -inch, 6 in a package ; other sizes loose.
These Valves have standard iron pipe thread on bottom, and are made with California hose thread on side.
$\dagger$ Carried in San Francisco only.

## COMPRESSION SILL COCKS.

ANGLE PATTERN.

2149.C.

Wheel handle. female IRON PIPE THREAD AND $3 / 4-\operatorname{INCH}$ HOSE THREAD.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough Nickel-Plated. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 17 | Puppetman ..... | \$25.00 | Pupugero ....... | \$28.00 | Pupulant........ | \$31.00 |
| 34 | 21 | Puppyism ...... | 25.00 | Pupugimus...... | 28.00 | Pupulum ........ | 31.00 |

One-half dozen in a box.


LOOSE KEY. FEMALE IRON PIPE THREAD AND $3 / 4-$ INCH HOSE THRFAD.

| Size, Inches. | Weight Per Dozen, Lbs. | Rough Nickel-Plated. |  | Finished. |  | Nickel-Plated. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Code. | Per Dozen. | Code. | Per Dozen. | Code. | Per Dozen. |
| 1/2 | 15 | Puramente | \$28.00 | Puraques......... | $\$ 31.00$ | Purblind | \$34.00 |
| $3 / 4$ | 19 | Puranic | 28.00 | Puravero......... | 31.00 | Purcon ... | 34.00 |

One-half dozen in a box.
One Key furnished with each Loose Key Pattern Cock.

In Orders and Specifications give Plate Numbers and Sizes.

## STEAM METAL VALVES.

STANDARD. BRASS.


2160-C.
Globe Valve.


2161-C.
Angle Valve.

GLOBE VALVES-2160-C.

| Code | Purefactos | Purefactum | Purezza | Purflewed | Purfling | Purgaban |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/8 | 1/4 | $3 / 8$ | 1/2 | 3/4 | 1 |
| Each. | \$0.72 | 72 | . 77 | 1.00 | 1.26 | 1.80 |
| Weight each, lbs. | 3/8 | 5/8 | 3/4 | 1 | $11 / 2$ | 2 |
| Code $\qquad$ Size, inches. | $\begin{aligned} & \text { Purgabile } \\ & 11 / 4 \end{aligned}$ | $\begin{aligned} & \text { Purgabunt } \\ & 11 / 2 \end{aligned}$ | $\begin{gathered} \text { Purgador } \\ \mathbf{2} \end{gathered}$ | Purgamina $\dagger 21 / 2$ | Purgarem $\dagger 3$ | Purgarono $\dagger 4$ |
| Each. | \$2.52 | 3.50 | 5.30 | 10.00 | 14.40 | 36.00 |
| Weight each, lbs. | 31/4 | 4 | 6 | 10 | 17 |  |

$1 / 8$ to $3 / 4$-inch, 6 in a package; 1-inch, 4 in a package; other sizes loose.

ANGLE VALVES-2161-C.

| Code | Purgativos | Purgatos | Purgatrice | Purgavamo | Purgement |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/8 | 1/4 | $3 / 8$ | $\dagger 1 / 2 \times 3 / 8$ | 1/2 |
| Each | \$0.72 | . 72 | . 77 | 1.00 | 1.00 |
| Weight each, lbs. | ...... | 5/8 | 3/4 | 7/8 | 1 |
| Code $\qquad$ Size, inches. | $\begin{gathered} \text { Purgeoir } \\ 3 / 4 \end{gathered}$ | $\begin{aligned} & \text { Purghero } \\ & 1 \end{aligned}$ | Purghetto $11 / 4$ | $\begin{aligned} & \text { Purgitabo } \\ & 11 / 2 \end{aligned}$ | Purgonal |
| Each. | \$1.26 | 1.80 | 2.52 | 3.50 | 5.30 |
| Weight each, lbs. | $11 / 2$ | 2 | $31 / 4$ | 4 | 6 |

1/4 to $3 / 4$-inch, 6 in a package; 1-inch, 4 in a package; other sizes loose.
† Carried in San Francisco only.

## STEAM METAL VALVES.




Angle Valve. Cross Handle.
Nickel-Plated all over.

IRON WHEEL GLOBE VALVE, ROUGH NICKEL-PLATED-2165-C.

$\dagger$ BRASS WHEEL GLOBE VALVES, FINISHED AND NICKEL-PLATED ALL OVER-2165-C.


CROSS HANDLE GLOBE VALVES, FINISHED AND NICKEL-PLATED ALL OVER-2166-C.

| Code Size, inches. | $\begin{gathered} \text { Purimfest } \\ 3 / 8 \end{gathered}$ | $\begin{gathered} \text { Purimorum } \\ 1 / 2 \end{gathered}$ | $\begin{gathered} \text { Purimos } \\ 3+1 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Each. | \$2. 40 | 2.65 | 3.20 |
| Weight each | $3 / 4$ | 1 | $11 / 2$ |

IRON WHEEL ANGLE VALVE, ROUGH NICKEL-PLATED-2167-C.


CROSS HANDLE ANGLE VALVES, FINISHED AND NICKEL-PLATED ALL OVER-2168-C.

| Code <br> Size, inches | Puritanism $3 / 8$ | Puritanize $\dagger 1 / 2 \times 3 / 8$ | Purlicue 1/2 | $\begin{gathered} \text { Purline } \\ 3_{+} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Each | \$2.40 | 2.65 | 2.65 | 3.20 |
| Weight each, lbs. | $3 / 4$ | $3 / 4$ | 1 | $11 / 2$ |

All on this page, six in a package.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## GAS LOG VALVES.

BRASS WITH FINISHED AND NICKEL-PLATED HANDLES AND STEMS.


The stems on above valves measure $17 / 8$-inch in the clear.
$\dagger$ Carried in San Francisco only.

## STEAM METAL VALVES.

WITH JENKINS' DISC. BRASS.



2179-(.
Globe Valve

† 2180 - $\%$.
Angle Valve.

†こ181-1.
Globe Valve. Jenkins Bros.' Genuine.

## GLOBE VALVES WITH JENKINS' DISC-2179-C.

| Code | Purpling | Purplish | Purpoint | Purported | P'uposeful | Purposise | P'urpurace | Purpurados |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 14 | 3/8 | 1/2 | $3 \cdot 1$ | 1 | $1^{1}+$ | 1 1/2 | 2 |
| Each. | \$1.10 | 1.25 | 1.60 | $\therefore$ 20 | 2.80 | 4.00 | 5.50 | $8 . \%$ |
| W'eight each, lbs........... | 5/8 | 5 | 1 | $1{ }^{1}$ | $21 /$ | $43+$ | $61 / 2$ | $101 / 2$ |

†ANGLE VALVES WITH JENKINS' DISC-2I80-C.

†JENKINS BROS.' GENUINE GLOBE VALVES-2181-C.
Code $\qquad$ Purpurear Purpureo Purpuhell Purpurholz Purpurico Purpurique Purpurisso Purpurizar P'urpurkop
Size, inches
Each $\qquad$

| $1 / 4$ | $3 / 3$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $11+$ | $11 / 2$ | $\mathbf{y}$ | $21 / 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 1.10$ | 1.25 | 1.60 | 2.20 | 2.80 | 4.00 | 5.50 | 8.75 | 15.75 |
| $7 / 5$ | 1 | $11 / 2$ | $23 / 8$ | $31 / 2$ | $51+$ | 63 | 11 | $171 / 2$ |

${ }^{1}+$ to $3_{4}^{3}$-inch, 6 in a package; 1 to $11 / 2$-inch, 2 in a package: other sizes loose.

## †JENKINS' DISCS FOR VALVES.

| Code | Purpurlack | 'urpurope | Pupurroth | Purpursat | ck | Purseful | Pursiness | Pursive | Purslane |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................ | $1 / 4$ | 3/8 | 1/2 | $3 / 4$ | 1 | 114 | $11 / 2$ | 2 | $21 / 2$ |
| Each........................ | \$0.03 | . 04 | . 04 | . 05 | . 06 | . 09 | . 12 | . 18 | 24 |

$\dagger$ Carried in San Francisco only.

## STEAM METAL CHECK VALVES.



HORIZONTAL CHECK VALVES-2187-C.
Code $\qquad$ Pursuable Pursual Pursuing Purtenance $P$
$\qquad$ 1/4
3/8

Each $\qquad$ $\$ 0.65 \quad .70$
70
.90

| urtenance | Purulence |
| :---: | :---: |
| $\mathbf{3 / 4}$ | $\mathbf{1}$ |
| 1.15 | 1.60 |

$11 / 4$
$1 / 4$
2.25
$11 / 2$
$1 / 2$
 sarum Puscinos
$\begin{array}{lllllllllll}\text { Weight each, lbs. } & 1 / 4 & 3 / 8 & 1 / 2 & 3 / 4 & 11 / 4 & 21 / 8 & 23 / 8 & 41 / 4 & 8 & 14\end{array}$
$\begin{array}{lllllllllll}\text { Veight each, lbs. } & 1 / 4 & 3 / 8 & 1 / 2 & 3 / 4 & 11 / 4 & 21 / 8 & 23 / 8 & 41 / 4 & 8 & 14\end{array}$
$\begin{array}{lllllllllll}\text { Veight each, lbs. } & 1 / 4 & 3 / 8 & 1 / 2 & 3 / 4 & 11 / 4 & 21 / 8 & 23 / 8 & 41 / 4 & 8 & 14\end{array}$
$\begin{array}{lllllllllll}\text { Veight each, lbs. } & 1 / 4 & 3 / 8 & 1 / 2 & 3 / 4 & 11 / 4 & 21 / 8 & 23 / 8 & 41 / 4 & 8 & 14\end{array}$
3.15
4.75
$9.00 \quad 13.00$

## VERTICAL CHECK VALVES-2188-C.

| Code $\qquad$ Size, inches. | Puscinum $3 / 8$ | Puseyism 1/2 | Puseyistic 3/4 | $\begin{aligned} & \text { Puseyite } \\ & 1 \end{aligned}$ | Pushpin 11/4 | Pushtoo $11 / 2$ | $\stackrel{\text { Pusieron }}{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.77 | 1.00 | 1.26 | 1.80 | 2.52 | 3.50 | 5.30 |
| Weight each, lbs. | $3 / 8$ | $3 / 8$ | 3/4 | $11 / 4$ | 11/4 | $23 / 8$ | $41 / 8$ |

## †HORIZONTAL CHECK VALVES WITH JENKINS' DISC-2I89-C.

| Code. |
| :---: |
| Each... |
| Weight each, lbs. |


| $\begin{gathered} \text { Pusignando } \\ 1 / 2 \end{gathered}$ | $\begin{gathered} \text { Pusillorum } \\ 3 / 4 \end{gathered}$ | $\begin{aligned} & \text { Pussulam } \\ & \hline 1 \end{aligned}$ | Pussulis $11 / 4$ | $\begin{aligned} & \text { Pustawolf } \\ & 11 / 2 \end{aligned}$ | $\underset{\mathbf{Q}}{ }$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$1.30 | 1.90 | 2.60 | 3.60 | 5.00 | 7.50 |
| 7/8 | $13 / 8$ | 2 | $31 / 8$ | $43 / 8$ | 8 |

1/4 to 1 -inch, 6 in a package; $11 / 4$-inch, 3 in a package; other sizes loose.
$\dagger$ Carried in San Francisco only.

## "DETROIT" RADIATOR VALVES.

IMPROVED QUICK-OPENING. FOR HOT WATER. CAN BE PACKED WITHOUT DRAWING THE WATER.


2195-C.
"Detroit" Quick-Opening Hot Water Radiator Valve, with Wood Wheel and Male Union. made from Steam Metal ; threaded Right Hand on Union and Right Hand on Bottom.


2196-C.
Sectional View.

One-quarter turn of the handle opens or closes the passage, an arrow on the top of the handle indicating the position of the valve. The openings are of full area, with no obstruction to the free passage of water.

Circulation is maintained at all times, thus obviating danger of freezing. The valve proper, or rotating disc, is practically a piston ring, and therefore readily adjusts itself to any variation in size, due to expansion and contraction.

The conical projection on stem at A forms a perfectly tight joint at this point, and allows the stem to be repacked without drawing off the water. Note also the recess at $B$, between valve body and circular disc. This passage prevents dirt or sediment from sticking between these parts and causing disc to bind.

| Code. | Pustulesco | Pustuletta | Pustulosas |
| :---: | :---: | :---: | :---: |
| Size, inches. | 3/4 | 1 | $11 / 4$ |
| Rough Body Nickel-Plated all over, each. | \$2.85 | 3.65 | 5.05 |
| Weight each, lbs.. | $\ldots$ | $\ldots$ | $\ldots$ |

## RADIATOR VALVES.

```
STEAM MEAL. JENKINS' DISC.
```



2200 - C .

RADIATOR VALVE WITH JENKINS' DISC, WOOD WHEEL AND MALE UNION, THREADED RIGHT HAND ON UNION AND RIGHT HAND ON BOTTOM.

| Code | Pusulati | Putamus | Putaretis | Putatifs | Putativa |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 3/4 | 1 | 11/4 | 11/2 | 2 |
| Rough body, nickel-plated all over | \$3.80 | 4.75 | 6.40 | 8.10 | 13.10 |
| Weight each, lbs. | ........ | ...... | $31 / 2$ | 5 | ........ |

## UNION RADIATOR ELBOWS.



Both threads right hand.

## HOSE FIRE VALVE.

BRASS. ROUGH BODY. FINISHED TRIMMINGS

$\dagger 2205-\mathrm{C}$.

## WHARF HYDRANT.

IRON BODY. BRASS MOUNTED.

$\dagger 2206$ - $\mathbf{C}$.
†HOSE FIRE VALVES WITHZCAP AND CHAIN-2205-C.

| Code.......... | Putchock | Putdelver | Putefacta | Puterhahn |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | $11 / 4$ | $11 / 2$ | 2 | $21 / 2$ |
| Each. | \$4.85 | 6.50 | 9.25 | 16.50 |
| Weight each |  |  | 9 | $16^{1 / 4}$ |

†HOSE FIRE VALVES WITHOUT CAP AND CHAIN.

| Code... | Putgalg | Putgraver | Puticules | Putidorum |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | 11/4 | $11 / 2$ | 2 | $21 / 2$ |
| Each | \$3.50 | 5.00 | 7.50 | 14.00 |
| Weight each, lbs. | ...... | ...... | 81/4 | $141 / 2$ |

These Valves have iron pipe thread on the bottom and $21 / 2$-inch Standard Pacific Coast Hose
Thread on side. They have a non-rising stem and loose revolving discs. No grinding between face of valve and discs.
†WHARF HYDRANT WITH CAP AND CHAIN-2206-C.


These Hydrants have iron pipe thread on the bottom and $21 / 2$-inch Standard Pacific Coast Hose Thread on side.
$\dagger$ Carried in San Francisco only.


2210-C.

## "READY" THROTTLE VALVES.

ALL BRASS. STEAM METAL. STANDARD.

Code. $\qquad$ Putorias Putoribus Putramina Putrabile Putridame Putridendo
$\qquad$ 1/2 Size, inches....... $\begin{array}{ll}1 / 2 & 3 / 4\end{array}$

$1 \quad 1$
$11 / 2$
.00 7.50

Eac
7/8
11/4
$13 / 4$
$21 / 2$
4
6
These Valves are suitable for laundry machinery, railroad tanks, water motors, refineries, paper mills, breweries, tanneries, oil and gas works, or wherever a reliable quick action is required under moderate pressure.

## STRAIGHTWAY U.S. GATE VALVES.

RISING STEM STEAM METAL. DOUBLE DISCS. STANDARD PRESSURE. SCREWED ENDS.


2013-(.

| Code Size, inches.. | $\begin{gathered} \text { Putridiva } \\ 1 / 4 \end{gathered}$ | Putridus 3/8 | $\begin{aligned} & \text { Putrificar } \\ & 1 / 2 \end{aligned}$ | $\begin{gathered} \text { Putrilagem } \\ 3 / 4 \end{gathered}$ | $\begin{aligned} & \text { Putrivores } \\ & \hline \end{aligned}$ | Putruosi 1 1/4 | Puttella $11 / 2$ | $\stackrel{\text { Puttina }}{\mathbf{Q}}$ | Puttyer $21 / 2$ | Putwates 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$1.25 | 1.25 | 1.30 | 1.75 | 2.50 | 3.50 | 5.00 | 7.50 | 14.00 | 20.00 |
| Weight each, lbs. | 5/8 | 3/4 | 1 | $11 / 2$ | $23 / 8$ | $37 / 8$ | 6 | $81 / 2$ | 13 | 18 |

These Valves embody all the desirable features of a first-class valve of this character. Made of best Steam Metal, and are tested and warranted.

IRON BODY SCOTT STRAIGHTWAY GATE VALVES.

BRONZE MOUNTED. STANDARD WEIGHT. FOR STEAM WORKING PRESSURE<br>OF 100 POUNDS. OPEN LEFT.



2918- (1.
Screwed Ends with Packing Nut.


2019-1.
Showing Sectional View.

| Corle.... Inches. | Putzdame $\bullet$ | Puukasisten $01 / 2$ | $\begin{aligned} & \text { P'utzladen } \\ & \mathbf{3} \end{aligned}$ | $\begin{aligned} & \text { Puluzladiden } \\ & 4 \end{aligned}$ | $\begin{aligned} & \text { Putzamachen } \\ & 6 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$10.00 | 12.00 | 15.00 | 20.00 | 30.00 |
| Weight each, llss........................................... | 25 | 30 | $321 / 2$ | $5: 3$ | ........ |

DIMENSIONS.

| Diameter of port, inche | $\because$ | $21 / 2$ | 3 | 4 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Face to face, inches | 5)3/8 | 614 | 71/8 | 83 | $10 \mathrm{t} / 2$ |
| Center of port to top of | 8 | 10 | $10^{3}+$ | $131 / 2$ | $19^{3}+$ |
| Diameter of wheel, inche | 5 | 6 | 63.4 | $81 / 2$ | 11 |



2020-1.
Soott's Patent Cylinder IVedge.

On accomnt of the peculiar construction of the patent cylinder wedge and the full circular bearing upon the back of the clise or gate, the wear is taken from the face and seat, thus insuring a perfect seating and the impossibility of the discs springing, bending or getting out of shape. The dises are raised by their lugs coming in contact with corresponding shoulders on the wedge. By the peculiar arangement of the lugs, the bearing of one dise slightly rotates upon the other, so that the least movement on the stem releases one dise slightly in advance of the other, thereby cansing the valve to open easily under the heaviest pressures.

Please note that the Scott Gate Valve has no special inlet side, it can be connected in any way, horizontally, vertically or otherwise, with either side to the pressure, so no expensive mistakes can be made.
All stem threads are cut sifuare. All parts are interchangeable and can be supplied upon short notice. Some of the best mechanical engineers clam that a solid dise in a valve does not allow for unequal expansion, consequently the dise expands more in one place than another, cansing the valve to leak.

## LUDLOW VALVES.

Ludlow Valves are made by the oldest established and largest Valve and Hydrant Manufacturers in the world, who make but one grade of goods-the best that can be produced, as to design, material and workmanship. We caution purchasers against imitations. All genuine Ludlow Valves are made exclusively by the Ludlow Valve Manufacturing Co., and have the word "Ludlow " cast or stamped upon them.

We are prepared to furnish estimates for Valves of any size and for any service, and shall be pleased to mail special catalogue of Ludlow Valves on application.

A-Case.

B-Cover or Bonnet.

C-Stem or Spindle.

D-Packing Plate or Stuffing Box.

E-Stuffing Box Gland or Follower.

F-Stem Nut.

Fig. 70.

GG-Gates.

H-Gate Rings.

I-Case Rings.

J-Top Wedge.

K-Bottom Wedge.

L-Throat Flange Bolts.

M-Stuffing Box or Follower Bolts.

## LUDLOW DOUBLE GATE STRAIGHTWAY VALVES.

Ludlow Valves are constructed on scientific principles.
The metal used, both iron and bronze, is of the highest grade.
The workmanship is unsurpassed.
The construction of the gates and wedges, and method of wedging, is such that there is
No locking or wedging of gates in closing until they are directly opposite port or valve opening.
No grinding or dragging faces of gates on seats in either locking or unlocking gates.
No binding of stem in wedge.
No stripping thread from stems, by gates canting to either side in closing and wedging.
There is less wear on the faces of gates and seats in opening and closing than on valves of any other make.

They work equally well with pressure either side of gate, and, without exception, they last longer and give better satisfaction than valves of other makes, and their record proves the assertion.

Fig. 84.


Style of Gates and Wedges for Double Gate Valves.

## METHOD OF OPENING, CLOSING AND WEDGING OR LOCKING GATES.

The internal mechanism of Valve consists of the stem, two gates, and two bevel-faced wedges, the wedges being entirely independent of the gates (or discs) and working between them.

Closing and Wedging.-By the action of the stem, which works through the nut in the upper wedge, the gates descend parallel with their seats until the lower wedge strikes the stop (or boss) in the bottom of case-the gates and upper wedge continuing their downward movement until the face or bevel of upper wedge comes in contact with face or bevel of lower wedge. The gates then being down opposite port or valve opening, the face of the upper wedge moves across the face of the lower wedge, bringing pressure to bear on the backs of both gates, from central bearings, thus forcing them apart and squarely against their seats.

Opening. - In opening Valve, the first turn of the stem releases the upper wedge from contact with the lower wedge, thereby instantly releasing both gates (or discs) from their seats before they commence to rise. This is not possible is any other make of valve.

There is less wear on the faces of gates and seats in opening and closing, as there is not the grinding which must necessarily follow in valves of other makes in drawing one or both gates off their seats before obtaining any relief.

The nut through which the stem (or spindle) works forms part of the upper wedge, which has center bearings, and there is therefore no possibility of the gates being canted to either side in closing and wedging, thereby binding or stripping thread from stem, as is the case in other makes, where the nut is independent and rests loosely in extreme top of gates.

Our method of wedging or locking gates, and construction of wedges, as now applied, was adopted only after years of test and experience, and is superior to anything yet put on the market, and Ludlow Valves will work easier under any pressure and with less wear than those of any other make.

All our Double Gate Valves work equally well with the pressure either side of gate.
The superiority of Ludlow Valves, and their method of operating, is attested by the fact that there are more of them made and sold than any other make of valve, and the majority of our competitors making paralleled faced valves imitate them as far as they possibly can without infringing our patents.

## DIRECTIONS FOR ORDERING.

## TO ENABLE US TO FILL ORDERS PROMPTLY AND CORRECTLY, IT IS NECESSARY THAT THE FOLLOWING INFORMATION BE GIVEN:

Size.
Number of List ( $1,4,6,7$, etc.)
Whether Bronze Mounted or All Iron.
Whether Screwed, Flanged, Hub, or Spigot Ends.

Whether to turn to the right to open

or whether to turn to the Left to open.


Number of pounds pressure or head under which Valves are to work.
Whether to be used for steam, water, gas, etc.

## If with Gearing.

Whether with Spur Gearing or with Bevel Gearing.

## If with By-Pass.

The size of By-pass desired.
Unless otherwise ordered, all Hub and Spigot Valves will have Nut on Spindle (or Stem) for wrench. All others will have Hand Wheel.

If not to stand upright, state whether Valve is to lie on edge or on its flat side. (A Valve placed in a vertical pipe lies on its flat side.)

Valves without gearing will be sent with Inside Screw, unless otherwise specified.
When ordering Flanged Valves, please note changes in diameters of End Flanges, Lists Nos. 1, 4 and 6, which now conform to schedule of Standard Flanges adopted July 18, 1894, by Master Steam and Hot Water Fitters' Association and American Society of Mechanical Engineers, and at Manufacturers' meeting, June 28, 1901.

When ordering Flanged End Valves with the end Flanges drilled, if not to be drilled to our templet, give diameter of bolt circle, size and number of holes, and state whether stem (or center) line passes through the top bolt hole (Fig. 1), or between two top bolt holes (Fig. 2).


Fig. 1.


Fig. $\Omega$.

## LIST No. 7. BRONZE VALVES, DOUBLE GATE.

Tested $\left\{\begin{array}{c}6 \text { inches and under at } 300 \mathrm{lbs} \text {. pressure } \\ 7 \text { inches and above at } 250 \mathrm{lbs} \text {. pressure }\end{array}\right\} \begin{gathered}\text { per square inch, water pressure. } \\ \text { Test guaranteed. }\end{gathered}$
FOR STEAM OR WATER. OPEN LEFT.
These Valves are strictly first-class, both as to material and workmanship.
The metal used is equal to that called for in government work, and both as to tensile and transverse strength is superior to that used in any other make of valve.

For finish and durability they are unsurpassed.
They are made to bear a heavy working pressure.
They work equally well with the pressure either side of gate.
The gates and seats have ground faces, thus insuring steam-tight and water-tight joints. The gates have parallel faces and the method of closing and wedging is such that there is less wear on the faces of gates and seats than on any other make of valve.

For method of closing and wedging gates, see page 547 .
All sizes up to six inches have the screwed stuffing-box and follower-nut, unless otherwise ordered.

All sizes above six inches have the bolted packing gland and follower.
We can also furnish Valves of all sizes and for all pressures of either deoxidized or phosphor bronze. Prices given upon application.

Fig. 86.
Fig. 85.

$\dagger$ 2233-C.
Screwed Ends.
With Screwed Cover and Rising Stem.
Style of Sizes,
$3 / 8,1 / 2,3 / 4$ and 1 Inch.

+2234-C.
Screwed Ends.
With Screwed Cover and Screwed Stuffing-Box.

Style of Sizes, $11 / 4,11 / 2$ and 2 Inches.
Code

| Pyanepsia | Pyanisies | Pycme | Pycnidia | Pycnite | Pycnitidis |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $3 / 8$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ |
| $21 / 4$ | $2^{1 / 4}$ | $21 / 2$ | $27 / 8$ | $33 / 8$ | $33 / 4$ |
| $\$ 1.40$ | 1.40 | 1.80 | 2.35 | 3.40 | 4.40 |
| $\$ 0.80$ | .80 | .80 | .80 | 1.00 | 1.00 |
| $11 / 4$ | $11 / 2$ | $21 / 2$ | $31 / 4$ | $43 / 4$ | $51 / 2$ |


| Code | Pynocarpe | Pycnocomis | Pycnocycle | Pycnodes | Pycnodont |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 |
| Face to face of screwed ends, inches | $41 / 8$ | $4^{13 / 16}$ | 5 | $55 / 8$ | 61/4 |
| Screwed ends, each. | \$6.25 | 13.75 | 15.50 | 23.50 | 34.00 |
| For slide stem and lever, add to list | \$1.25 | 1.75 | 2.00 | 2.00 | 2.00 |
| Weight each, lbs. | 91/4 | $151 / 2$ | 19 | 30 | $441 / 2$ |

Fig. 87.

Sizes $3 / 8,1 / 2,3 / 4$ and 1 -inch of our regular Screw Stem Bronze Valves have rising stem; all other sizes have non-rising stem. We, however, will furnish these sizes, if so ordered, with non-rising stem at a slightly increased cost over the rising stem valves. Unless otherwise specified, we will continue sending these sizes with rising stem.

Valves with removable gate and seat rings furnished if desired. Prices given upon application. $\dagger$ Carried in San Francisco only.

## LIST NO. 4. DOUBLE GATE VALVES.

IRON BODY WITH BRONZE MOUNTINGS, AND ALL IRON. FOR WATER, STEAM, GAS, OIL, AMMONIA. ETC. BRONZE MOUNTED, FLANGED, SCREWED, HUB OR SPIGOT ENDS.

Tested at 300 pounds pressure per square inch, water pressure. Test guaranteed. For heavy working pressures either side of gate. These Valves are constructed on scientific principles. For method of construction, see page 546.



Screwed End Valve. With Bolted Packing Plate and Follower.

Style of sizes above 6 inches.
Fig. 11.

Fig. 98.


Flanged End Valve.
With Bronze Screwed Packing Box and Follower Nut.

Style of sizes up to and including 6 inches.


Hub or Bell End Water or Gas Valve.
Style of all sizes.

†2240-C.
Showing style of Sliding Stem and Lever. For either Screwed or Flanged End Valves.
$\dagger$ Carried in San Francisco only.

## †LIST NO. 4. DOUBLE GATE VALVES.

## IRON BODY WITH BRONZE MOUNTINGS.

## Screwed and Flanged Ends open left. Hub or Bell Ends open right.

Tested at 300 pounds pressure per square inch, water pressure. Test guaranteed.
For Heavy Working Pressures Either Side of Gate.

| Size, inches. | $11 / 2$ | $21 / 2$ |  |  | 3 | $31 / 2$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code | Pycnomon | Pycnoso | e Pycnostyle P |  | Pycnotique | Pyctam | Pydna |
| Screwed Ends, each. | \$6.00 | 7.00 | 10.25 |  | 12.25 | 16.50 | 18.00 |
| Weight each, lbs. | 8 | 14 | $221 / 2$ |  | $291 / 2$ | 55 | 62 |
| Code.. | Pygela | Pygme | Pygmies |  | Pygomele | Pygopage | Pygopodes |
| Flanged Ends, each | \$6.25 | 7.50 |  | 75 | 13.25 | 17.50 | 18.50 |
| Weight each, lbs. | 14 | 23 | 32 |  | 43 | $691 / 2$ | 76 |
| Code |  | Pyleno |  |  | Pyloride | Pymatus | Pyoning |
| Hub or Bell Ends, each. |  | 7.00 |  | $.00$ | 14.50 | 16.00 | 17.00 |
| Weight each, lbs ....................... |  | 25 | 38 |  | 67 | ...... | 80 |
| Code |  |  |  |  | Pyrrhico |  | Pyrrhonia |
| Screwed Ends for Casing, each ............... | ...... | $\ldots$ |  |  | \$12.25 | ..... | 18.00 |
| Weight each, lbs........................ |  |  | .... |  | $291 / 2$ |  | 62 |
| For Slide Stem and Lever,add to list.. | \$1.00 | 1.25 | 1.75 |  | 2.00 | 2.00 | 2.00 |
| For Outside Screw and Yoke, add to list..... | \$...... |  | .... |  | 8.50 | 9.25 | 10.00 |
| Size, inches.............................. | 41/2 | 5 | 6 | 7 | 8 | 10 | 12 |
| Code | Pyeli | Pygarg | Pygargum | Pygastres | P Pygathrix | Pygaules | Pygedium |
| Screwed Ends, eac | \$23.00 | 25.00 | 30.50 | 38.00 | 45.00 | 64.00 | 82.50 |
| Weight each, lbs.. | 103 | 130 | 160 | 210 | 239 | 391 | 530 |
| Code...................................... | Pygopus | Pygoscele | Pygure | Pyjama | Pylada | Pylagoras | Pylartes |
| Flanged Ends, each. | \$ 23.50 | 25.50 | 31.00 | 38.00 | 43.50 | 64.50 | 80.00 |
| Weight each, lbs. | 111 | 131 | 166 | 220 | 236 | 406 | 513 |
| Code | Pyoplanie | Pyragres | Pyralida | Pyrame | Pyramide | Pyrgite | Pyrgomes |
| Hub or Bell Ends, eac | \$22.00 | 24.00 | 28.00 | 37.00 | 42.00 | 60.00 | 76.00 |
| Weight each, lbs...... |  | 142 | 180 | 208 | 244 | 384 | 490 |
| Code |  | Pyrrhoses | Pyrrhule | .............. | . ............. |  |  |
| Screwed Ends for Casing, each | ..... | \$25.00 | 30.50 | ...... | ...... | ...... | $\ldots$ |
| Weight each, lbs. | ...... | 130 | 160 | ...... | ...... | ...... |  |
| For Slide Stem and Lever,add to list.. | \$2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 3.25 | 4.00 |
| For Outside Screw and Yoke, add to list. | \$11.00 | 12.00 | 14.00 | 16.00 | 18.00 | 23.00 | 27.00 |

## Dimensions-Inches.



See page 550 for Description and Cuts. See page 548 for Directions for Ordering.
$\dagger$ Carried in San Francisco only.

## LIST NO. I. SINGLE GATE VALVES.

IRON BODY WITH BRONZE MOUNTINGS. OPEN LEFT.

Tested $\left\{\begin{array}{c}6 \text { inches and under at } 150 \mathrm{lbs} \text {. pressure } \\ 7 \text { inches and over at } 100 \mathrm{lbs} . \text { pressure }\end{array}\right\}$ per square inch, water pressure.

## For Medium Working Pressures.

## SCREWED ENDS. FOR WATER, STEAM, GAS, ETC.

These Valves are intended for use in places where Double Gate Valves are not necessary or desirable, or where the pressure is not excessive. When used where the pressure is in but one direction they should be so placed that the pressure comes on the back of the gate.

The Iron-Bodied Valves have all bearings fully bronze mounted.
The seat ring is screwed in. The gate ring is dovetailed and riveted on. The stem is made of solid bronze.

Both the gate ring and seat ring have ground faces, thus making a steam-tight and water-tight joint.

These Valves have been manufactured for the past thirty years. They are giving perfect satisfaction, and we believe them to be the best Single Gate Valves made.

Fig. 96.


Screwed End Valve.
With Bronze Screwed Packing Box and Follower Nut.
Style of sizes up to and including 6 inches.

Fig. 97.


Screwed End Valve. With Bolted Packing Plate and Follower.
Style of sizes above 6 inches.

| Code | Quabbe | Quabbeln | Quacha | Quackery | Quackler | Quader | Quaderno | Quaderputz | Quaderwerk |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sizes, inches............... | 3 | $31 / 2$ | 4 | 5 | 6 | 7 | 8 | 10 | 12 |
| Face to face of Screwed Ends, inches........... | $51 / 2$ | $71 / 4$ | 71 | 11 | 111 | $115 / 8$ | 125/8 | 125/8 | 131/4 |
| Each. | \$11.00 | 15.00 | 16.25 | 23.75 | 28.00 | 35.25 | 40.00 | 58.00 | 74.00 |
| Weight each, lbs.. | $291 / 2$ | 54 | 59 | 124 | 151 | 204 | 231 | 365 |  |

See page 548 for Directions for Ordering.
†Carried in San Francisco only.

## LIST No. 6. DOUBLE GATE VALVES.

IRON BODY WITH BRONZE MOUNTINGS. FOR WATER, STEAM, GAS. ETC. TESTED AT 300 POUNDS PRESSURE PER SQUARE INCH, WATER PRESSURE. TEST GUARANTEED. FOR HEAVY WORKING PRESSURES EITHER SIDE OF GATE.

These Valves are intended for use in all places where Double Gate Valves are desired to work under heavy pressure.

The metal-both iron and bronze-is of the highest grade, and the workmanship is unsurpassed.
They are constructed on scientific principles.
The bearings on the Iron-bodied Valves are fully bronze mounted.
The gates are adjustable, with center bearings, and cannot become stuck in the case.
The gates and seats have ground faces, thus insuring water-tight and steam-tight joints.
They work equally well with the pressure either side of gate.
For method of closing and wedging gates, see page $5 \pm 7$.
A test of the tensile and transverse strength of the metal used-both iron and bronze-and a comparison with other valves as to the ease with which they can be opened and closed under pressure, will prove their superiority over any other in the market.

> HUB OR SPIGOT ENDS, FOR WATER.

These Valves are superior to all other Water-Works Valves, for the reason that there is less wear on the face of the gates and seats in opening and closing, they work easier under heavy pressure, last longer, require fewer repairs, and give better general satisfaction, and their record proves the assertion.

There are more of these Valves in use in the water-works systems of the United States than of any other make.

## FLANGED ENDS, FOR STEAM.

These Valves are arranged especially for steam, but work equally well for water.
The gearings and gear brackets on all Geared Valves are heavy and substantial.
By-passes of any size furnished as desired. Prices given upon application.
Fig. 107.


## DOUBLE GATE VALVE.

WITHOUT GEARING.
HUB OR BELL ENDS.

Made with either hub, flanged or spigot ends.
Made with either hand-wheel or nut for wrench.
Made with outside screw and yoke.
Made with or without by-pass.
Made for water or steam.
Made in any way desired.
Made to work equally well with pressure either side of gate.

Made for hard service.
Made to give satisfaction.

Prices for special designs given upon application.

For prices, see page 554.

See page 548 for Directions for Ordering.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## LIST NO. 6. DOUBLE GATE VALVES.

IRON BODY WITH BRONZE MOUNTINGS. OPEN LEFT.

Tested at 300 pounds pressure per square inch, water pressure. Test guaranteed. For Heavy Working Pressures Either Side of Gate.

| Size, inches | 14 | 15 | 16 | 17 | 18 | 20 | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code. | Quadrabile | Quadradura | Quadragene | Quadrammo | Quadramus | Quadrantal | Quadrassi |
| Flanged Ends, each. | \$130.00 | 148.00 | 153.00 | 184.00 | 215.00 | 254.00 | 325.00 |
| Weight each, lbs. | 770 | 890 | 963 | ...... | 1260 | 1650 |  |
| Code | Quadraste | Quadratim | Quadratore | ......... | Quadrezza | Quadriceps | Quadricorn |
| Hub or Bell Ends, each | \$122.00 | 138.00 | 143.00 | $\ldots$ | 205.00 | 242.00 | 315.00 |
| Weight each, lbs. | 705 | 820 | 875 | $\ldots$ | 1203 | 1585 |  |
| Code. | Quadrifido | Quadrifore | Quadriga | ......... | Quadrigato | Quadrigona |  |
| Spigot Ends, each | \$127.00 | 146.00 | 152.00 | $\ldots$ | 217.00 | 254.00 | ...... |
| Weight each, lbs. |  |  |  | ...... |  |  |  |
| For Spur Gearing add to list.. | \$26.00 | 26.00 | 26.00 | 16.00 | 16.00 | 16.00 | 20.00 |
| For Bevel Gearing add to list | 28.00 | 28.00 | 28.00 | 18.00 | 18.00 | 18.00 | 24.50 |
| Weight each, lbs............... | 114 | 114 | 114 |  | 68 | 68 |  |
| Dimensions, Inches. |  |  |  |  |  |  |  |
| Face to face of Flanges........ | 153/4 | 153/4 | 16 | ...... | 17 | 173/4 | 201/4 |
| Diam. of Standard Flanges.. | 21 | 221/4 | $231 / 2$ | $\ldots$ | 25 | $271 / 2$ | 29 |
| End to end of Hubs or Bells.. | $153 / 4$ | $151 / 2$ | 153/4 | ...... | 18 | 191/2 | 191/2 |
| Depth of Hubs................. | $41 / 8$ | 4 | $41 / 8$ | $\ldots$ | 5 | 5 | $51 / 8$ |
| Size, inches. | 24 | 28 | 30 | 36 | 40 | 42 | 48 |
| Code | Quadriloge | Quadrin | Quadrupear | Quadruplex | Quadruplo | Quadrussis | Quaeler |
| Flanged Ends, each | \$390.00 | 625.00 | 690.00 | 1060.00 | 1560.00 | 1670.00 | 2425.00 |
| Weight each, lbs................ | 2580 |  | 4260 | 8600 |  | 11650 | 18970 |
| Code | Quaerunt | Quaesamur | Quaesivit | Quaestoren | Quaffed | Quaggy | Quagmire |
| Hub or Bell Ends, each | \$375.00 | 600.00 | 650.00 | 1020.00 | 1520.00 | 1630.00 | 2375.00 |
| Weight each, lbs............... | 2461 |  | 4425 | 8500 | 11500 | 12160 | 18550 |
| Code | Quailing | Quaintly | Quakerish | Quakernest | Qualcosa | Qualcuno | Qualesso |
| Spigot Ends, each. | \$390.00 | 625.00 | 660.00 | 1068.00 | 1590.00 | 1710.00 | 2500.00 |
| Weight each, lbs................ |  |  |  | ...... |  |  |  |
| For Spur Gearing add to list | \$20.00 | 70.00 | 70.00 | 90.00 | 90.00 | 90.00 | 160.00 |
| For Bevel Gearing add to list | 24.50 | 95.00 | 95.00 | 125.00 | 125.00 | 125.00 | 200.00 |
| Weight each, lbs............... | 104 | 200 | ...... | ...... | ...... | ...... |  |
| Dimensions, Inches. |  |  |  |  |  |  |  |
| Face to face of Flanges....... | 21 | $261 / 2$ | $261 / 2$ | 28 | $341 / 2$ | $341 / 2$ | $421 / 2$ |
| Diam. of Standard Flanges.. | 32 | 37 | 39 | 45 | 51 | 53 | 59 |
| End to end of Hubs or Bells | 221/4 | $241 / 2$ | 26 | 267/8 | 33 | 33 | 39 |
| Depth of Hubs ................. | 61/4 | $61 / 2$ | 67/8 | 53/4 | $51 / 2$ | $51 / 2$ | 61/4 |

[^30]For Description and cut, see page 553. See page 548 for Directions for Ordering.
$\dagger$ Carried in San Francisco only.

## LIST NO. 23. AUTOMATIC LEVER AND FLOAT AIR VALVES.

## WITH BRONZE MOUNTINGS. COPPER FLOAT.

Fig. 49.


These Valves are intended to be placed on mains at high points where air is likely to accumulate and obstruct the flow of water.

When air takes the place of water about the float $b$ in Valve Chamber, the float which is attached to the bronze lever $a$ drops, thus opening the small valve $d$, allowing the air to escape. As the water returns it lifts the float, thereby closing the valve.

There are hundreds in use, and giving perfect satisfaction.

## FOR LIGHT PRESSURE.

Tested at 100 lbs . pressure per square inch, water pressure. Test guaranteed.



2251 -C.
Fig. 29. Code..

Each. trucks passing over it. which Boxes are wanted.

## FOR HEAVY PRESSURE.

Tested at 300 lbs . pressure per square inch, water pressure. Test guaranteed.
Code ............................................ Qualibus
Inlet Connection screwed, inches...... $\mathbf{3}$
Outlet, inches$\stackrel{3}{2}$
Air Valve Opening, inch. ..... 7/16
Each. ..... $\$ 47.00$
Weight, lbs ..... 208

Tested to 600 lbs . pressure per square inch, water pressure. Test guaranteed. Qualificar
Inlet Connection, screwed, inches ....................................................... $\mathbf{3}$
Outlet, inches .............................................................................. 2
Air Valve Opening, inch ............................................................................... 2/16
$\$ 64.00$
Weight, lbs............................................................................. 320

## LUDLOW ADJUSTABLE VALVE BOXES.

INSIDE DIAMETER, 5 INCHES.


These Boxes are made in different lengths, varying according to size of Valve-the larger the Valve the shorter the Box. The lower section rests on the dome or cover of Valve. The upper section being entirely independent of lower section, there is no danger of Valve being broken by heavy traffic passing over Box, as is the case with a Screw Box. The Box Cover can easily be removed by using the point of a pick or bar, but cannot be thrown out by

In ordering always give size of Valves and depth of trench, to bottom, for

# †LIST NO. 75. LUDLOW FIRE HYDRANTS. <br> BRONZE MOUNTED. RUBBER FACED GATES. 

## DESCRIPTION AND METHOD OF OPERATING.

The Ludiow Fire Hydrant is of the Gate type, and its construction was undertaken with the view of meeting the demand for a strictly first-class non-freezing Hydrant, strong in every part, simple in construction, and one that would give a practically unobstructed flow of water, perform its work easily and satisfactorily under all sorts and conditions of soil and weather, produce no water hammer in closing, remain tight under all pressures, with a positive drip that would drain hydrant barrel completely, and so arranged that all the working parts could be taken out without doing any digging or disturbing the hydrant barrel, and judging from the number of cities and towns now using them (they being now in use in over 1800 different places), the thousands annually sold and the numerous testimonials received regarding its merits, we feel justified in claiming it has no equal in the market.

## CLOSING AND OPENING HYDRANT GATE AND DRIP VALVE.

In closing, the gate is moved downward by the action of the stem through the threaded bronze wedge nut in the back of gate until it strikes the stop at the bottom of the projection in the back of hydrant (see cut page 557), when by the action of the bronze wedge nut, moving along the incline on the back of gate, it is forced squarely against its seat without any grinding movement on either the rubber gasket with which gate is faced or on the bronze seat ring, against which it closes, the projection at the top and bottom of gate keeping the rubber gasket away from the seat ring until it is forced squarely against it by the action of the wedge nut.

The final turn of the stem, after the gate is closed and wedged, opens the drip valve.
In opening Hydrant, the first turn of the stem closes the drip valve, after which the bronze wedge nut in back of gate is loosened, thus relieving the gate from its seat.

When the gate is fully opened, the face of the gate lies directly against the front of hydrant barrel, and is thus protected from injury by any foreign substance passing through the hydrant.

Drip Valve.-The Drip Valve, which is of bronze, faced with rubber, is screwed to lower end of hydrant stem, and works in a bronze cup set in the extreme bottom of hydrant.

It is adjustable and will always seat properly.
It is positive in its action.
It allows hydrant barrel to drain completely, leaving no water standing in it to freeze.
It opens only after the gate is closed and wedged.
It closes before the gate is released from its seat or any water enters barrel of hydrant.
It cannot become clogged, as it never leaves the Drip cup, and revolves with every movement of the stem.

There is no wear or grinding on the Rubber with which it is faced, as the lower part ceases to move as soon as Valve comes to its seat, the upper part only continuing to revolve with stem until the Gate is forced to its seat.

The best Hydrant Drip Valve made.
Where Hydrants are placed in wet ground and water enters the stand pipe or barrel, we have a simple arrangement for keeping the Drip Valve closed, which can be easily attached without shutting off the pressure and without digging.

Rubber.-Both the Gate and Drip Valve are faced with heavy solid special rubber gaskets, which we believe are far superior to either leather or metal for this purpose.
$\Lambda \mathrm{n}$ experience of over 30 years with Rubber-faced Hydrants has proved that the elasticity of our special quality of rubber is not appreciably lessened by use or time. Profiting by our experience, several of our competitors, formerly using leather have lately adopted Rubber-faced Valves.

Bronze Mountings.-All the bearings are fully bronze mounted, the mountings consisting of the following parts: Seat Ring, Drip Cup, Drip Valve, lower or threaded section of Stem, Wedge Nut, Plate holding Rubber Gasket in Gate, Beveled Nut in back of Gate, Sleeve fitting on top of Stem and Nozzle.

See page 557 for cuts and Directions for Ordering. See page 558 for Prices.
+Carried in San Francisco only.

In Orders and Specifications give Plate Numbers and Sizes.

Fig. 130.


2255-C.
With bottom cut away, showing Gate open, and Drip Valve, which is in the extreme bottom of Hydrant, closed.

Fig. 131.

$2256-\mathrm{C}$.
Sectional cut, showing Gate closed and locked, and Drip Valve, in extreme bottom of Hydrant, open.

## DIRECTIONS FOR ORDERING.

1st. Give size of Valve Opening or inside diameter of Stand Pipe.
2d. Give length from surface of ground to bottom of Connecting Pipe.
3d. Give size of bottom Connecting Pipe. Regular Hydrants have Hub or Bell Ends. If wanted with Flange or Screwed Ends, so state.

4th. Give number and size of Nozzles.
5th. Give exact diameter of Nozzle Threads at top and bottom and number of Threads to the inch, or send either a Nozzle Cap, a Hose Coupling or a sample Nozzle for sizer.

6th. Give size and style of Nut for Wrench-whether square or five-sided (or otherwise), length on side, and whether straight or taper.

7th. State whether to open by turning to the left or to the right.
See page 558 for prices and page 556 for Description.
Send for special catalogue Fire Hydrants.

## †LIST NO. 75. LUDLOW FIRE HYDRANTS.

## BRONZE MOUNTED. RUBBER-FACED GATE.

Tested at 300 pounds pressure per square inch, water pressure. Test guaranteed.

Prices are based on a length of five feet from surface of ground to bottom of connecting pipe.

|  | 흥 <br> 울레 <br> 측쿨 <br> 第咨 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Inches. } \\ & \mathbf{y} \\ & \mathbf{3} \end{aligned}$ | Inches 3 $45 / 8$ | $\begin{aligned} & \hline \begin{array}{l} \text { Inches. } \\ 2 \\ 3 \text { or } 4 \end{array} \end{aligned}$ | \$17.00 | \$28.00 |  |  |  | ........... |  |  | ........... | $\ldots$ |
| 4 | $53 / 4$ | 3 or 4 |  | \$ 31.00 | \$33.00 |  |  |  | \$33.00 | \$35.00 | \$37.00 |  |
| 4 | $53 / 4$ | 6 | ......... | 31.50 | 33.50 |  |  | ......... | \$33.50 | \$35.50 | \$37.50 |  |
| $41 / 2$ | $61 / 4$ | 6 | ......... |  | 35.50 | \$37.50 |  |  | 35.50 | 37.50 | 39.50 |  |
| 5 | 7 | 6 |  |  | 40.50 | 42.50 | $\$ 44.50$ |  | 40.50 | 42.50 | 44.50 | \$46.50 |
| 6 | 8 | 6 |  |  | 50.00 | 52.00 | 54.00 |  | 50.00 | 52.00 | 54.00 | 56.00 |
| 6 | 8 | 8 |  |  | 51.25 | 53.25 | 55.25 |  | 51.25 | 53.25 | 55.25 | 57.25 |
| 8 | 10 | 8 or 10 |  |  |  |  |  | \$130.00 |  |  |  |  |


|  |  |  |  |  |  |  | Outer Jackets or Frost Cases with the Ludlow Hydrant are entirely unnecessary, and therefore a useless expense. For those desiring Frost Cases, however, we quote list prices as follow's: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Inches. } \\ \mathbf{2} \end{gathered}$ |  |  | \$0.45 |  |  |  |  |  |  |
| 3 |  |  | . 60 |  |  | \$ 9.25 |  | \$ 4.50 | \$0.44 |
| 4 |  |  | . 75 | \$3.50 |  | 12.50 |  | \$ 5.00 | . 50 |
| 4 |  |  | 75 | 3.50 |  | 12.50 |  | 5.00 | . 50 |
| $4^{1 / 2}$ |  |  | 80 | 3.50 |  | 15.50 |  | 5.60 | . 58 |
| 5 |  |  | .85 .00 | 3.75 |  | 15.50 |  | 6.50 | .70 90 |
| 6 | \$58.00 | \$54.00 | 1.00 | 3.75 | \$7.25 | 18.50 |  | 7.50 | .90 .90 |
| 6 8 | 59.25 | 55.25 | 1.00 2.25 | 3.75 4.50 | 7.25 | 19.50 27.00 |  | 7.50 11.00 | .90 1.30 |
|  |  |  |  |  |  |  |  |  |  |

The size of Secondary Gate Valves, as quoted above, corresponds to size of Seat Ring or Valve Opening of Hydrant.

See page 556 for Description, and page 557 for Cuts and Directions for Ordering.
$\dagger$ Carried in San Francisco only.

RELIABLE WATER PRESSURE REGULATOR.

BRASS.

| Code | Qualify |
| :---: | :---: |
| Size, inches. | 1/2 |
| Each | \$5.60 |
| Weight each | ..... |

The Reliable Water Pressure Regulator on the service pipe will keep the pressure uniform, regardless of varying pressure in the city mains.

To be used where water pressure is high, or where pressure is increased suddenly for fire purposes.

Prevents hammering and bursting of pipes and rattling of faucets.
Prevents opening of spring faucets and float valves in closet flush tanks.
Avoids splashing and overflows.
A saving of water where meter rates exist.
Water companies can protect their pressure during fires when their house services are provided with this reducing valve.

Connect city water service pipe with end marked "Inlet."
Thoroughly flush out all pipes before connecting the Regulator to prevent dirt, grit, red lead, solder and iron chips from getting into the Regulator Valve.

## HERSEY DISC WATER METERS.

## THOROUGHLY ACCURATE AND ENTIRELY RELIABLE.



The Hersey Disc Meter is constructed of the very best non-corrosive materials. All screws, spindles and shafts are of phosphor bronze, and the piston of highest grade hard rubber, making the meter practically indestructible, all parts being interchangeable.

Each Meter is provided with a perforated strainer located in such a position as to exclude all foreign matter from the working parts.

The superior workmanship, quality of material and accuracy of registration have made this meter most popular.

| Code.......... Size, inches.. | Quamto 5/8 | Quandary $3 / 4$ | Quandel 1 | Quando $11 / 2$ | Quantos 2 | $\begin{gathered} \text { Quantulos } \\ \mathbf{3} \end{gathered}$ | Quapalier 4 | Quarkes 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$8.00 | 12.00 | 16.00 | 30.00 | 50.00 | 90.00 | 175.00 | 375.00 |
| Connections | 40 | . 60 | . 80 | No Charge | No Charge | No Charge | No Charge | No Charge |
| Capacity per min., cu. ft.. | 2 | 4 | 8 | 12 | 20 | 36 | 72 | 120 |
| " " " gals... | 15 | 30 | 60 | 90 | 150 | 270 | 540 | 900 |
| Length, inches.............. | $73 / 8$ | 9 | 107/8 | 125/8 | 151/4 | 24 | 29 | $361 / 2$ |
| Width, inches.. | $51 / 2$ | 6 | 8 | $111 / 8$ | 121/8 | $181 / 8$ | 22 | $273 / 4$ |
| Height, inches.............. | $61 / 4$ | 7 | $71 / 4$ | $81 / 4$ | 11 | 165/8 | 193/4 | 25 |
| Net weight, lbs............. | 8 | 12 | 16 | 4 | 69 | 226 | 387 | 775 |
| Gross weight, lbs........... | 12 | 19 | 28 | 65 | 96 | 277 | 461 | 863 |

For economy in transportation, $5 / 8,3 / 4$ and 1 -inch meters are packed five in a case when orders will permit. Such packages weigh 57, 87 and 115 lbs. respectively.

Hersey Disc Meters $5 / 8,3 / 4$ and 1 -inch have Bronze Metal Cases; $11 / 2$-inch and larger have Galvanized Iron Cases.

All 5/8, 3/4 and 1-inch Hersey Disc Meters are provided with male thread connections.
All $11 / 2$ and 2 -inch Hersey Disc Meters are provided with female thread connections. Galvanized iron unions or flange connections are provided when requested, without extra cost.

All 3, 4 and 6 -inch Hersey Disc Meters are cast with flange connections. Corresponding flanges for wrought iron pipe or bell and spigot connections for cast iron pipe are furnished, when requested, without extra charge.

All Hersey Disc Meters from $5 / 8$-inch to 2 -inch inclusive are provided with inside Strainers.
All Hersey Disc Meters from 3 -inch to 6 -inch inclusive have no strainers.
All Hersey Disc Meters are provided with ordinary round registers adjusted to cubic feet, unless otherwise ordered, and are tested on the basis of 62.27 lbs . per cubic foot.

Hersey Disc Meters $5 / 8,3 / 4$ and 1 -inch can be furnished with Galvanized Iron cases. Prices upon application.

## NAMES AND NUMBERS OF HERSEY DISC METER PARTS.



| Code |  |  |
| :---: | :---: | :---: |
| Quartado.............. |  | Intermediate Train. |
| Quartaine........ .... |  | Bonnet. |
| Quartanos ........ ..... | F 3 | Clock. |
| Quartasse............ | F | Bottom Plate. |
| Quartaut............. | F | Ring. |
| Quartel.... | F | Hard Rubber Disc. |
| Quartelot.............. |  | Top Plate. |
| Quarterone ........... | F | Bottom Case. |
| Quartmass.... |  | Top Case. |
| Quartprobe ... | F 10 | Flange Packing. |
| Quartridge | F 11 | Strainer. |
| Quartseite. |  | Leather Washer. |
| Quartzosa. | F 13 | Coupling. |

Code
Quarzfels .........
Quarzfluss .......
Quarzmehl ......
Quarzstein .......
Quasimente.....
Quasimodo......
Quassabar .......
Quassabulo ......
Quassabunt .....
Quassamus......
Quassandos.....
Quassation ......
Quassatura ......

| F | 14 | Lid. |
| :--- | :--- | :--- |
| F 15 | Piston Spindle. |  |
| F 16 | Flange Bolts. |  |
| F 17 | Plate Screws. |  |
| F 18 | Bell Connection. |  |
| F 19 | Flange Connection. |  |
| F 20 | Spigot Connection. |  |
| F 21 | Intermediate Train Gear. |  |
| F 22 | Bonnet Screws. |  |
| F 23 | Clock Gear. |  |
| F 26 | Hard Rubber Control. |  |
| F 27 | Abutment. |  |
| F 28 | Clock Dial. |  |

All parts of Meters are made to interchange.
All Meters have a shop number which is stamped on the lid.
In ordering parts always give the shop number of the meter that the parts are wanted for, and also the name and number of the part.

NAMES AND NUMBERS OF HERSEY DISC METER PARTS.


Code
Quassier........... D 1 Intermediate Train.
Quassorum ...... D 2 Bonnet.
Quatefacio........ D 3 Clock.
Quatefacta ....... D 4 Bottom Plate.
Quateles ........... D 5 Ring.
Quatember ....... D 6 Hard Rubber Disc.
Quaternate ...... D 7 Top Plate. Quatiunt .......... D 8 Bottom Case. Quatorzain ...... D 9 Top Case. Quatrains ......... D 10 Flange Packing. Quatralvo ........ D 12 Leather Washer. Quatriduo ......... D 13 Coupling. Quatrim............ D 14 Lid. Quatrinca.........

D 19


2273-C.


Code

| Quatschen........ | D 16 | Flange Bolts. |
| :--- | :--- | :--- | :--- |
| Quatschige ...... | D 17 | Plate Screws. |
| Quavemire........ | D 18 | Bell Connection. |
| Quaxabor ......... | D 19 | Flange Connection. |
| Quaxamur ......... | D 20 | Spigot Connection. |
| Quaxavisti....... | D 21 | Intermediate Train Gear. |
| Quaxeris......... | D 22 | Bonnet Screw. |
| Quayage ......... | D 23 | Clock Gear. |
| Queachy.......... | D 24 | Clock Screws. |
| Queasily.......... | D 25 | Nipple. |
| Queatur ......... | D 26 | Control. |
| Quebrable....... | D 27 | Abutment. |
| Quebrador ....... | D 28 | Clock Dial. | Quebrador ....... D 28 Clock Dial.

All parts of Meters are made to interchange.
All Meters have a shop number, which is stamped on the lid.
In ordering parts always give the shop number of the Meter that the parts are wanted for, and also the name and number of the part.

## HERSEY ROTARY WATER METERS.

## THOROUGHLY ACCURATE AND ENTIRELY RELIABLE UNDER A VERY SEVERE SERVICE. PRACTICALLY INDESTRUCTIBLE.


2274.C.

Interior


2275-C.

The Hersey Rotary Meter is a type of meter quite distinct from any other. The Measuring Chamber is practically indestructible from wear; consequently it can be maintained in repair at a cost much lower than any other meter in existence.

The material, workmanship and design of this meter are unsurpassed; it has been used for a long term of years, and has thus stood the test of time. The meter is fitted with perforated strainers, all parts being of the best non-corrosive materials and interchangeable.


For economy in transportation, $5 / 8,3 / 4$ and 1 -inch meters are packed five in a case when orders will permit. Such packages weigh 90,140 and 230 pounds respectively.

All 5/8, 3/4 and 1-inch Hersey Rotary Meters are provided with male thread connections
All $11 / 2$ and 2 -inch Hersey Rotary Meters are provided with female thread connections. Galvanized iron unions or flange connections are provided, when requested, without extra cost.

All 3, 4 and 6 -inch Hersey Rotary Meters are cast with flange connections. Corresponding flanges for wrought iron pipe or bell and spigot connections for cast iron pipe are furnished, when requested, without extra charge.

All Hersey Rotary Meters, $5 / 8$-inch to 2 -inch inclusive, have inside strainers.
All Hersey Rotary Meters, 3 -inch to 6 -inch inclusive, have no strainers.
All Hersey Rotary Meters are provided with ordinary round reading registers adjusted to Cubic Feet, unless otherwise ordered, and are tested on the basis of 62.27 lbs . per Cubic Foot.

## NAMES AND NUMBERS OF HERSEY ROTARY METER PARTS.




Code


Queenlike......... Queenly .. ........ Queenpost ........ Queenship ........
Queerish $\qquad$ R 2 R 3 R 4 Queerity.... R Quehacer Quejando ......... Quejasen ... Quejemos ......... Quejicoso ......... Quejigal


2276-C
Intermediate Train. Bonnet.
Clock.
Bottom Plate.
Hard Rubber Ring. Hard Rubber Piston.
Top Plate.
Bottom Case. Top Case.
Flange Packing.
Strainer.
Leather Washer.
Coupling.


Code
Quellader ......... R 14 Lid. Quellchen... Quellgrund....... Quellmoos ... Quellpunkt Quellreich ........ Quellsalz ......... R Quellstock ......... R 21 Intermediate Train Gear. Quelques ......... R 22 Bonnet Screws. Quemadero ...... R 23 Clock Gear. Quemander ...... R 24 Clock Screws. Quemases......... R 25 Nipple. Quemazon........ R 28 Clock Dial All parts of Meters are made to interchange.
All Meters have a shop number, which is stamped on the lid.
In ordering parts always give the shop number of the Meter that the parts are wanted for, and also the name and number of the part.

## HERSEY TORRENT WATER METERS.



The Hersey Torrent Meter is designed especially with a view to measuring large volumes of water and delivering the same practically without retardation or loss of pressure. It is a current meter operating by the impact of the water upon a wheel which is extremely sensitive, insuring accuracy of registration on small flows. All working parts are non-corrosive, and bearings are heavy and substantial to withstand the most severe service. It is adapted for railroad tanks, elevators and fire services, water motors, and on all services requiring large volumes of water.

| Code. <br> Size, inches. | $\begin{aligned} & \text { Quemeful } \\ & \quad \underset{2}{2} \end{aligned}$ | Quenched 3 | Quenching 4 | Quenelle 6 | $\begin{aligned} & \text { Quengeln } \\ & 8 \end{aligned}$ | Quennecon 10 | Quennons 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$40.00 | 80.00 | 160.00 | 350.00 | 650.00 | 800.00 | 1000.00 |
| Connections | No Charge | No Charge | No Charge | No Charge | No Charge | No Charge | No Charge |
| Capacity per min., cu | 32 | 72 | 128 | 288 | 512 | 800 | 1152 |
| gallons........... | 240 | 540 | 960 | 2160 | 3840 | 6000 | 8640 |
| Length, inches | 151/4 | 24 | 29 | $361 / 2$ | 483/4 | 57 | 68 |
| Width, inches............................ | $83 / 8$ | 11 | 131/2 | 17 | 20 | 24 | 30 |
| Height, inches. | $111 / 2$ | $143 / 4$ | 181/4 | 213/4 | $261 / 2$ | 32 | 39 |
| Net weight, lbs. | 60 | 136 | 230 | 439 | 806 | 1400 | 2100 |
| Gross weight, lbs...................... | 87 | 184 | 309 | 543 | 944 | 1570 | 2380 |

All 2-inch Hersey Torrent Meters are provided with female thread connections. Galvanized iron unions or flange connections are provided, when requested, without extra cost.

All Hersey Torrent Meters from 3 inches to 12 inches inclusive are cast with flanges. Corresponding flanges for wrought iron pipe or bell and spigot connections for cast iron pipe are furnished, when requested, without extra charge.

All Hersey Torrent Meters have strainers forming part of the case.
All Hersey Torrent Meters are provided with ordinary round reading registers adjusted to Cubic Feet, unless otherwise ordered, and are tested on the basis of 62.27 lbs . per Cubic Foot.

## NAMES AND NUMBERS OF HERSEY TORRENT METER PARTS.



2281-C.

| Code. <br> Quenote ......... | T | 1 | Intermediate Train. |
| :--- | :--- | :--- | :--- |
| Quentchen. ....... | T | 2 | Bonnet. |
| Quentura ......... | T | 3 | Clock. |
| Quepa ............ | T | 6 | Hard Rubber Wheel. |
| Quepais.......... | T | 8 | Bottom Case. |
| Quepamus....... | T | 9 | Top Case. |
| Querable.......... | T 10 | Flange Packing. |  |
| Queralle .......... | T 11 | Fish Trap Strainer. |  |
| Queraxe ......... | T 14 | Lid. |  |
| Querband........ | T 15 | Spindle. |  |
| Querbartes....... | T 16 | Flange Bolts. |  |
| Querbinden...... | T 17 | Deflector Screws. |  |
| Querblick........ | T 18 | Bell Connection. |  |


| Code. |  |  |
| :--- | :--- | :--- |
| Querbogen........ | T 19 | Flange Connection. |
| Querceta........ | T 20 | Spigot Connection. |
| Quercitron...... | T 21 | Intermediate Train Gear. |
| Quercubus........ | T 22 | Bonnet Screws. |
| Quercula........ | T 23 | Clock Gear. |
| Querdamm ...... | T 24 | Clock Screws. |
| Querdurch....... | T 28 | Clock Dial. |
| Querelador...... | T 29 | Spindle Bushing. |
| Querelante...... | T 30 | Spindle Cap. |
| Querelava....... | T 31 | Hard Rubber Ball. |
| Querelis.......... | T 32 | Deflector. |
| Querelosi ........ | T 33 | Fish Trap Body. |
| Querenca ....... | T 34 | Fish Trap Cover. |

All parts of meters are made to interchange.
All meters have a shop number, which is stamped on the lid.
In ordering parts always give the shop number of the meter that the parts are wanted for, and also the name and number of the part.

## HERSEY METER REGISTERS.



ROUND READING REGISTER INDICATING 41,873<br>CUBIC FEET.

Meters registering in Cubic Feet are tested on the basis of 62.27 lbs . per Cubic Foot.
Meters registering in U. S. Gallons are tested on the basis of 8.34 lbs per Gallon.
Meters registering in Imperial Gallons are tested on the basis of 10 lbs . per Gallon.
Meters registering in Litres are tested on the basis of 2.2 lbs . per Litre.

STRAIGHT READING REGISTER INDICATING 41,873 CUBIC FEET.

All straight reading registers are provided with tight bonnets, making them entirely water, dust and vermin proof, thus insuring nonliability to becoming clogged or corroded.


2283-C.

Always specify the kind of register and the unit of measurement wanted.

## HERSEY STRAINERS OR FISH TRAPS.

FOR USE BETWEEN METERS AND CONNECTIONS.

## SIMPLEX STRAINER.



Consisting of a bronze composition cylindrical shell with a tinned perforated copper removable strainer.

One end is provided with female thread to connect with meter spud; the other end is provided with male I. P. thread.


| Code | Querfahrt | Querfeld | $f$ |
| :---: | :---: | :---: | :---: |
| Size, inches. |  | 3/4 | 1 |
| Each | \$0.50 | . 75 | 1.00 |

CROSSWAY STRAINERS.

This is a galvanized cast iron cylindrical shell with removable heads and perforated brass removable strainer. By removing the heads this strainer can be thoroughly cleaned without removing it from the pipe.

It is provided with female threads.

| Code | Quergang | Quergasse | Querhaus | Querholz | Querholzes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 5/8 | 3/4 | 1 | $11 / 2$ | - |
| Each | \$2.00 | 3.00 | 4.00 | 5.00 | 6.00 |


$2286 . C^{\prime}$.

| Code | Qu | Querjoch | Querkanal |  |  | Querlinie |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, i |  | 3 | 4 | $6$ | $8$ | 10 |
| Each. | \$10.00 | 15.00 | 20.00 | 40.00 | 100.00 | 150.00 |

## CONCERNING THE ORDERING OF METERS.

Always specify the kind of meter wanted.

Always specify the size of meter wanted.

Always specify the kind of register and the unit of measurement wanted.

Always specify the kind of connections you want.

In ordering parts always give the shop number of the meter that the parts are wanted for, and also the name and number of the part.

Always specify whether you want shipment by freight or express, and also the route if you have any preference.

## CONCERNING THE SETTING OF METERS.

Blow out supply pipe before putting on a meter.

## Set Meter Level.

All meters are injured more or less by the action of frost. Care should be taken to set meters so that they are protected thoroughly from freezing.

All meters except hot water meters are injured by the action of heat. When meters are set in connection with boiler supply or where hot water or steam can back into the working parts, care should be taken to place a check valve to protect the meter.

Any substance that is soft or sticky will clog the working parts of a meter; therefore, red or white lead should not be used in making meter connections.

Meters are designed to measure water and will not pass foreign substances. Supply pipes usually contain accumulation of scale, gravel and dirt, so it is absolutely necessary to blow out supply pipe thoroughly before putting a meter on the pipe.

When meters are open for inspection or repair, see that they are thoroughly cleaned before replacing, and that the moving parts operate freely when they are in their proper place.

# FIDELITY STEAM TRAPS. 

FOR HIGH OR LOW PRESSURE.

On the market since 1889. Thousands in use in the largest Mills, Factories and Power Plants in this country.

These Traps are designed to work on a pressure ranging from 30 to 150 pounds per square inch.
The Fidelity Trap has no closed floats, levers, cams, diaphragms or expansion plugs.
They will lift water any height, according to the pressure carried, approximately two feet for every pound of pressure.

1679.C.

## EVERY TRAP GUARANTEED.

The Fidelity Steam Trap is provided with an open float, to which is attached the hollow valve arm, ground to fit the outlet plug.

The valve and valve seat together are a simple rotary valve (as used in all Corliss engines.) It continues to wear its own seat and remains tight; hence it never needs grinding.

The operation is as follows: When the Trap nearly fills with water the float rises to the top closing the outlet valve. The water will then overflow into the float. As soon as the float becomes partially filled with water, it continues to sink, and thus opens the valve, and such water will be forced out at the discharge through the passage way leading from the bottom of the float. The particular feature is that float does not drop to the bottom of the Trap when it is forced down as in other devices of this class, but the downward movement is retarded on account of the increasing floating power of the float, consequently the Trap discharges the water only as fast as it enters, and in order that the valve may open to a greater extent more water must enter the trap to sink the float proportionately.

## CONDENSING CAPACITIES BASED ON A PRESSURE OF 80 POUNDS.

| Code. | Nos. | Capacity Lin'l Feet, 1-in. Pipe. | Capacity Sq. Feet Radiation. | Inlet. | Outlet. | Floor to Inlet. | Floor to Outlet. | Net Weight. | Price. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Porphirio ...... | O0S | 500 | 200 | 3/4 in. | 1/2 in. |  |  | 50 lbs. | \$20.00 |
| Porphyr........ | 00 | 1,000 | 350 | 1 " | 3/4 6 | 10 in. | 3 in. | 100 " | 22.00 |
| Porpita ......... | 0 | 2,000 | 700 |  | $3 / 4$ | 10 " | 3 " | 100 " | 26.00 |
| Porporses...... | 1 | 3,000 | 1,000 | $1{ }^{\prime}$ | 3/4 " | 10 " | 3 " | 100 " | 30.00 |
| Porpora........ | 2 | 5,000 | 1,550 | $11 / 4$ " | 1 " | 111/2 " | 31/4 " | 125 " | 40.00 |
| Porporine...... | 3 | 10,000 | 3,000 | 11/2" | 11/4 " | 12 " | 33/4 " | 150 ، | 55.00 |

Always state the pressure under which you wish to use this Trap.

## SECTION 8

IRON PIPE AND FITTINGS,

> SOIL PIPE AND FITTINGS,

DRAINAGE FITTINGS, ETC.


Holbrook, Merrill \& Stetson,

## WROUGHT PIPE.

We carry a large stock of Standard Pipe up to 6 -inch, and can furnish Extra Heavy, Double Extra Heavy and Casing at market prices. Orders for cutting and threading promptly executed.

## MALLEABLE PIPE FITTINGS.

Our stock is of Thomas Devlin \& Co. make, and guaranteed to be of approved patterns and the most perfect fittings made as to material, construction, etc.

## CAST IRON THREADED FITTINGS.

Are of Standard pattern, weight and quality.

## CAST IRON SOIL PIPE AND FITTINGS.

We call your special attention, and we consider it of the utmost importance from a sanitary point of view, that Our Soil Pipe and Fittings are of superior quality throughout, sound, uniform in thickness, smooth surface inside and outside, and can be cut without splitting.

## DRAINAGE FITTINGS.

These are threaded and constructed so that when they are screwed to standard pipe a perfect joint is formed and there is no obstruction or unevenness on interior of wastes and vents as there are with the ordinary standard soil pipe. Drainage fittings are used for installing the Durham System of plumbing.

In ordering goods from this section by telegraph, it is only necessary to use the code over or opposite the number or size of the article wanted, preceded by words from code in front of this book.

Example:-Criticum anadido rabbetted and abianus raddrizza and abendzug rainblume.
Translation:-Ship at once two hundred and fifty feet three-quarter-inch Galvanized Pipe and thirty-five three-quarter Galvanized Beaded Elbows and twenty-five Galvanized Beaded Tees.

# STANDARD STEAM, GAS AND WATER PIPE. 

BLACK AND GALVANIZED.

1 -inch and smaller are proved to 300 pounds per square inch hydraulic pressure. $11 / 2$-inch and larger are proved to 500 pounds per square inch hydraulic pressure.

| Code, Black. | Code, Galvanized. | Code, Dipped. | $\begin{aligned} & \dot{\mathscr{E}} \underset{\stackrel{( }{U}}{\Xi} \\ & \dot{\sim} \\ & \dot{\sim} \end{aligned}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rababuz | Rabanus | Rabbrevia | 1/8 | \$0.24 | 500 | . 068 | \$0.05 1/2 | 27 |
| Rabacal | Rabatage | Rabbrusca | 1/4 | 0.42 | 300 | . 088 | . 05 I/2 | 18 |
| Rabacaria | Rabbah.. | Rabbuffo | 3/8 | 0.56 | 250 | . 091 | . 051 1/2 | 18 |
| Rabachage | Rabbelire | Rabeador | 1/2 | 0.84 | 200 | . 109 | . $081 / 2$ | 14 |
| Kabachait | Rabbetted | Raccomuna | 3/4 | 1.12 | 125 | . 113 | . 11 1/2 | 14 |
| Rabacheur. | Rabbiche | Racconsola | 1 | 1.67 | 90 | . 134 | .161/2 | $111 / 2$ |
| Rabachions | Rabbinado | Raccontano | 11/4 | 2.24 | 55 | 140 | . $221 / 2$ | $111 / 2$ |
| Rabadana | Rabbiner | Raccontava | $11 / 2$ | 2.63 | 55 | 145 | . 27 | $111 / 2$ |
| Rabadanes. | Rabbinica | Raccoppia | 2 | 3.61 | 19 | 154 | . 36 | $111 / 2$ |
| Rabalde | Rabbinista | Raccorcia. | $21 / 2$ | 5.74 | 19 | 204 | . $571 / 2$ | 8 |
| Rabalva | Rabbioso | Raccord | 3 | 7.54 | 19 | 217 | . $751 / 2$ | 8 |
| Rabaneras | Rabbitry . | Raccorder | +31/2 | 9.00 | 19 | 226 | . 95 | 8 |
| Rabanho. | Rabbonita | Raccoupler | 4 | 10.66 | 19 | 237 | 1.08 | 8 |
| Rabanillo. | Rabbordare | Raccours | 5 | 14.50 | 20 | . 259 | 1.45 | 8 |
| Rabaniza | Rabbordo. | Raccoutre | 6 | 18.76 | 20 | . 280 | 1.88 | 8 |

* Price List Adopted February 15, 1900.


## TABLE OF DIMENSIONS, WEIGHTS, ETC., OF STANDARD STEAM, GAS AND WATER PIPE.

| Diameter |  |  | Circumference. |  | Area. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 1/8 | 405 | 27 | 1.272 | 848 | 129 | 0573 | 9.44 | 0.106 | 2500 | 0006 | 005 |
| 1/4 | 54 | . 364 | 1.696 | 1.144 | 229 | 1041 | 7.075 | 0.141 | 1385. | 0026 | 021 |
| $3 / 8$ | 675 | 494 | 2.121 | 1.552 | 358 | 1917 | 5.657 | 0.177 | 751.5 | 0057 | . 047 |
| 1/2 | 84 | 623 | 2.639 | 1.957 | 554 | 3048 | 4.547 | 0.220 | 472.4 | 0102 | . 085 |
| 3/4 | 1.05 | 824 | 3.299 | 2.589 | 866 | 5333 | 3.637 | 0.275 | 270. | 0230 | . 190 |
| 1 | 1.315 | 1.048 | 4.131 | 3.292 | 1.357 | . 8626 | 2.904 | 0.344 | 166.99 | . 0408 | . 349 |
| $11 / 4$ | 1.66 | 1.38 | 5.215 | 4.335 | 2.164 | 1.496 | 2.301 | 0.434 | 96.25 | . 0638 | . 527 |
| $11 / 2$ | 1.9 | 1.611 | 5.969 | 5.061 | 2.835 | 2.038 | 2.01 | 0.497 | 70.65 | . 0918 | 760 |
| 2 | 2.375 | 2.067 | 7.461 | 6.494 | 4.430 | 3.356 | 1.608 | 0.621 | 42.36 | . 1632 | 1.356 |
| $21 / 2$ | 2.875 | 2.468 | 9.032 | 7.753 | 6.491 | 4.784 | 1.328 | 0.753 | 30.11 | 2550 | 2.116 |
| 3 | 3.5 | 3.067 | 10.996 | 9.636 | 9.621 | 7.388 | 1.091 | 0.916 | 19.49 | 3673 | 3.049 |
| $31 / 2$ | 4. | 3.548 | 12.566 | 11.146 | 12.566 | 9.887 | . 955 | 1.047 | 14.56 | 4998 | t. 155 |
| 4 | 4.5 | 4.026 | 14.137 | 12.648 | 15.904 | 12.73 | . 849 | 1.178 | 11.31 | 6528 | 5. 405 |
| 5 | 5.563 | 5.045 | 17.477 | 15.849 | 24.299 | 19.99 | . 687 | 1.456 | 7.20 | 1.020 | 8.500 |
| 6 | 6.625 | 6.065 | 20.813 | 19.054 | 34.471 | 28.888 | . 577 | 1.734 | 4.98 | 1.469 | 12.312 |

* The Standard U. S. Gallon of 231 Cubic Inches.

Black Pipe in random lengths, with threads and couplings, will be shipped unless otherwise ordered. An extra charge will be made for cut lengths or for Plugged and Reamed Pipe.

+ Carried in San Francisco only.


## STANDARD STEAM, GAS AND WATER PIPE.

ASPHALTUM DIPPED.

| Size, inches | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dipping only per 100 feet. | \$1.50 | 1.50 | 1.50 | 2.00 | 2.40 | 3.00 |
| Weight per 100 feet, lbs. | ...... | ...... | ..... | ...... | ...... |  |
| Size inches | $21 / 2$ | 3 | $31 / 2$ | 4 | 5 | 6 |
| Dipping only per 100 feet | \$4.00 | 4.50 | 5.25 | 6.00 | 7.50 | 9.00 |
| Weight per 100 feet, lbs. | ...... | ...... | ...... | ...... | ...... |  |

## LIST ON PIPE THREADING.

STANDARD LENGTH THREADS.


Cutting Pipe without threads half of above prices.

THREADS LONGER THAN STANDARD LENGTH.


Two threads charged for each piece of pipe cut and threaded.
We invariably charge for cutting threads on any pieces of pipe left over. For example: A customer orders one piece of pipe four feet long, both ends threaded. We charge him four feet of pipe and cutting two threads (one thread on the piece shipped and one thread on the piece cut off).

Give all measurements from center to center.

## CLASSIFICATION AND LIST.

ADOPTED BY MANUFACTURERS JUNE 19, 1895.
Revised Nov. 4, 1901, and April 10, 1903.


* Such fittings in Class D as have one or more openings smaller than $3 / 4$ to be Class C.
** Such fittings in Class E as have one or more openings smaller than 1 inch to be Class D.

The run of tees gives the sizes for the purpose of classification; the outlet being larger does not change it.

In ordering be particular to state whether beaded or plain.
An extra charge will be made for fittings not enumerated in standard list.

## MALLEABLE ELBOWS.



2301-C.
Plain.

2302.C.

Beaded.

PLAIN BLACK ELBOWS-230I-C.

| Code. | Racimales | Racimamos | Racimar | Racimo | Racimolare | Racimolo | Racimudos | Racinage | Racineux |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/8 | 1/4 | $3 / 8$ | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 |
| Class | A | B | B | C | D | D | E | E | E |
| Each | \$0.10 | . 10 | 12 | . 13 | . 15 | 21 | . 31 | . 46 | . 65 |
| Weight per 100, lbs | 9 | 12 | 16 | 24 | 38 | 54 | 90 | 135 | 190 |

PLAIN BLACK RIGHT AND LEFT ELBOWS-230I-C.

| Code | Racionar | Rackoons | Racktau | Raclement | Racleront | Racleurs | Racloir | Racodiace |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Class | A | A | B | C | C | D | D | D |
| Each. | \$0.17 | 21 | 22 | . 25 | . 30 | 45 | . 70 | 1.00 |
| Weight per 100, lbs. | 12 | 16 | 24 | 38 | 54 | 90 | 135 | 190 |

## BEADED BLACK ELBOWS-2302-C.

| Code. |  | Racodion | Racoforo | Racolage | Racoma Ra | Racomitra | Racontable | Racontages |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. |  | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 | 1 | $11 / 4$ |
| Class.. |  | A | B | B | C | D | D | E |
| Each. |  | \$0.12 | . 12 | . 15 | . 16 | . 17 | 27 | . 34 |
| Weight per 100, lbs. |  | $\ldots$ | 13 | 20 | 28 | 44 | 70 | 100 |
| Code | Racontais | Raconteur | Raconto | Racontons | Racoonda | Racopiles | Racoplaca | Racornira |
| Size, inches | $11 / 2$ | 2 | 21/2 | 3 | $31 / 2$ | 4 | 5 | 6 |
| Class | E | E | E | E | E | E | E | E |
| Each | \$0.48 | . 78 | 1.60 | 2.50 | 3.50 | 4.50 | 7.00 | 12.00 |
| Weight per 100, lbs. | 140 | 230 | 425 | 660 | 930 | 1160 | 1900 | 3200 |

## PLAIN GALVANIZED ELBOWS-230I-C.

| Code. | Racquetano | Racquetare | Racqui | itter Radari | iste Radarm | Radazza | Radbeslag | RadbrakeıI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................ | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Class......................... | B | B | C | D | D | E | E | E |
| Each. | \$0.15 | . 16 | 17 | 23 | . 33 | . 50 | . 73 | 1.00 |
| Weight per 100, lbs...... | 12 | 17 | 25 | 40 | 57 | 95 | 140 | 200 |
| BEADED GALVANIZED ELBOWS-2302-C. |  |  |  |  |  |  |  |  |
| Code. |  |  | Raddia | Raddobbi | Raddossare | Raddrizza | Radeaux | Radeloozer |
| Size, inches |  |  | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 | $11 / 4$ |
| Class |  |  | B | B | C | D | D | E |
| Each. |  |  | \$0.17 | . 20 | . 21 | 26 | 42 | . 55 |
| Weight per 100, lbs.. |  |  | 15 | 21 | 26 | 45 | 73 | 106 |
| Code |  |  | derbalk | Raderkast | Raderloop | Raderworm | Radevicus |  |
| Size, inches. Class |  |  | $11 / 2$ | 2 | $\mathrm{2}_{\mathrm{E}}^{1 / 2}$ | $\stackrel{3}{\text { E }}$ | $\mathrm{E}_{\mathrm{E}}^{1 / 2}$ | $\stackrel{\mathbf{4}}{\mathrm{E}}$ |
| Each. |  |  | 0.78 | 1.25 | 2.60 | 4.00 | 6.00 | 7.00 |
| Weight per 100, lbs.. |  |  | 150 | 240 | 450 | 700 | 980 | 1220 |



PLAIN BLACK REDUCING ELBOWS-2303-C.

| Code |  | Radfelge | Radgarn | Radhaspel | Radiadas | Radiancy | Radiately | Radiatule |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches |  | $3 / 8 x^{1 / 4}$ | 1/2x ${ }^{3 / 8}$ | $3 / 4 \times 3 / 8$ | $3 / 4{ }^{1 / 2}$ | $1 \mathrm{x}^{1 / 2}$ | 1x3/4 | $11 / 4 \times 3 / 4$ |
| Class. |  | B | C | C | C | C | D | D |
| Each. |  | \$0.15 | . 16 | . 17 | . 17 | . 27 | . 27 | . 34 |
| Weight per 100, lbs. |  | 16 | 24 | 38 | 38 | 54 | 54 | 90 |
| Code | Radicabar | Radicabunt | Radicada | Radicalism | Radicamos | Radicarian | Radicavit | Radicchio |
| Size, inches............. | 11/4x1 | $11 / 2 \times 3 / 4$ | 11/2x1 | 11/2x11/4 | $2 x^{3 / 4}$ | 2x11/4 | $2 \times 11 / 2$ | $21 / 2 \times 2$ |
| Class..................... | E | D | E | E | D | E | E | E |
| Each. | \$0.34 | . 48 | . 48 | . 48 | . 78 | . 78 | . 78 | 1.60 |
| Weight per 100, lbs... | 90 | 135 | 135 | 130 | 190 | 190 | 190 | 425 |
| PLAIN GALVANIZED REDUCING ELBOWS-2303-C. |  |  |  |  |  |  |  |  |
| Code |  | Radicelle | Radichella | Radicibus | Radiciform | Radicivore | Radicone | Radicosas |
| Size, inches |  | $1 / 2 \times 3 / 8$ | $3 / 4 \mathrm{x}^{1 / 2}$ | $1 \mathrm{x} 3 / 4$ | $11 / 4 \times 1$ | $11 / 2 \times 11 / 4$ | $2 \times 11 / 4$ | 2x1 ${ }^{1 / 2}$ |
| Ciass. |  | ${ }_{\text {¢ }}$ | C | D | E | E | E | E |
| Each. |  | \$0.21 | 26 | . 42 | . 55 | 78 | 1.25 | 1.25 |
| Weight per 100, lbs |  | 25 | 40 | 57 | 95 | 140 | 200 | 200 |
| PLAIN GALVANIZED $45^{\circ}$ ELB0WS-2304-C. |  |  |  |  |  |  |  |  |
| Code. |  |  |  |  | Radicular | Radiculode | Radigast | Radimadia |
| Size, inches |  |  |  |  | $11 / 4$ | $11 / 2$ | $\stackrel{\square}{\square}$ | $21 / 2$ |
| Class.. |  |  |  |  | C | C | C | D |
| Each. |  |  |  |  | \$0.60 | . 65 | 1.10 | 2.00 |
| Weight per $100, \mathrm{lbs}$ |  |  |  |  | 80 | 90 | 150 | 260 |

BEADED BLACK $45^{\circ}$ ELBOWS-2305-C.

| Code | Radiola | Radiolos | Radiometro R |  | Radiosus R | Radique | Radkranz | Radlaufen |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/4 | 3/8 | 1/2 |  | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ |
| Class....... | B | B | B |  | C | C | C | C |
| Each | \$0.12 | . 14 | . 18 |  | . 19 | . 33 | . 45 | . 55 |
| Weight per 100, lbs. | 10 | 14 | 22 |  | 36 | 63 | 86 | 100 |
| Code. |  | Radloch | Radnaaf | Radoter | Radoub | Radres | Radreif | Radslot |
| Size, inches |  | $\stackrel{2}{2}$ | $21 / 2$ | 3 | $31 / 2$ | $\pm$ | 5 | 6 |
| Class. |  | C | D | D | D | D | D | D |
| Each. |  | \$0.85 | 1.50 | 2.00 | 4.00 | 5.00 | .... |  |
| Weight per 100, lbs........ |  | 160 | 260 | 350 | 700 | 950 | 1250 |  |

BEADED GALVANIZED $45^{\circ}$ ELBOWS-2305-C.

| Code | Radspaak | Radsparre | Radsprung | Radspur | Radstock | Radstoss |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 | $11 / 4$ |
| Class | B | B | B | C | C | C |
| Each | \$0.13 | . 16 | 26 | . 28 | 47 | . 65 |
| Weight per 100, lbs | 11 | 15 | 24 | 38 | 65 | 90 |
| Code | Radules | Radulpho | Radunassi | Radunata | Raduniate | Radunt |
| Size, inches | $11 / 2$ | 2 | $\underline{01 / 2}$ | 3 | $31 / 2$ | 4 |
| Class | C | C | D | D | D | D |
| Each | \$0.76 | 1.25 | 2.10 | 3.00 | 6.00 | 8.00 |
| Weight per 100, lbs | 105 | 170 | 270 | 360 | 730 | 1000 |

MALLEABLE ELBOWS.

2305.C.

Plain $60^{\circ}$.

2309.C. Street Elbow.

2310.C.

Side Outlet.

PLAIN GALVANIZED $60^{\circ}$ ELBOWS-2308-C.

| Code | Radwelle | Radzapfen | Raesaces | Raethin |
| :---: | :---: | :---: | :---: | :---: |
| Size, | $11 / 4$ | 11/2 | 2 | $21 / 2$ |
| Class. | C | C | C | D |
| Each. | \$0.60 | . 65 | 1.10 | 2.00 |
| Weigh | 80 | 90 | 150 | 260 |

## BLACK STREET ELBOWS-2309-C.

| Code | Raethsel | Raetos | Raeuber | Rafael | Rafalant | Rafanella | Rafanino | Rafeling | Rafeo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches...... | 1/4 | 3/8 | 1/2 | $3 / 4$ | *3/4 $\mathrm{x}^{1 / 2}$ | 1 | 11/4 | 11/2 | 2 |
| Class.............. | B | B | C | C | C | D | D | D | D |
| Each .............. | \$0.12 | . 13 | . 18 | . 23 | . 23 | . 33 | . 45 | 65 | 1.00 |
| Weight per 100, lbs. | 12 | 16 | 24 | 44 | 44 | 76 | 100 | 150 | 230 |

*3/4-inch Female by $1 / 2$-inch Male.

GALVANIZED STREET ELBOWS-2309-C.

| Code | Raffaello | Raffammo | Raffando | Raffarono | Rafassimo | Raffaux | Raffavate | Raffendes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/4 | 3/8 | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ | 2 |
| Class. | B | B | C | C | D | D | D | D |
| Each | \$0.16 | . 17 | 26 | . 36 | . 50 | 67 | 1.00 | 1.60 |
| Weight per 100, lbs... | 12 | 16 | 25 | 48 | 80 | 10.5 | 158 | 240 |

## BLACK SIDE OUTLET ELBOWS-23I0-C.

| Code | Rafferemo | Raffermir | Raffgut | Raffholz | Raffica | Raffigura | Raffilasse |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 3/8 | 1/2 | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Class. | B | B | C | C | C | C | C |
| Each | \$0.16 | . 30 | . 34 | . 38 | . 70 | . 94 | 1.50 |
| Weight per 100, lbs.. | 16 | 30 | 40 | 60 | 110 | 150 | 230 |

GALVANIZED SIDE OUTLET ELBOWS-23I0-C.

| Code | Raffinage | Raffineur | Raffinons | Rafllesia | Raffolait | Raffoleras | Raffoliez |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $3 / 8$ | 1/2 | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ | $\stackrel{ \pm}{\square}$ |
| Class | B | B | C | C | C | C | C |
| Each | \$0.24 | . 40 | . 48 | .55 | 1.00 | 1.40 | 2.00 |
| Weight per $100 \mathrm{lbs} . .$. | 18 | 32 | 42 | 63 | 115 | 160 | 240 |

## MALLEABLE ELBOWS.



BLACK FEMALE DROP ELBOWS-23I3-C.

| Code | Rafforzare | Rafforzato | Rafforzava | Rafforzo | Raffossano |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | +1/4 | $3 / 8$ | 1/2 | +3/4 | +1 |
| Class. | B |  |  | C | C |
| Each | \$0.13 | . 18 | . 30 | 40 | . 50 |
| Weight per 100, lbs. | 13 | 18 | 30 | 45 | 75 |
| †GALVANIZED FEMALE DROP ELBOWS-2313-C. |  |  |  |  |  |
| Code. |  |  | Raffranca | Raffranchi | Raffronta |
| Size, inches Class. |  |  | $\begin{gathered} 3 / 8 \\ \text { B } \end{gathered}$ | $\begin{aligned} & 1 / 2 \\ & \text { B } \end{aligned}$ | $\stackrel{3}{4}$ |
| Each |  |  | \$0.25 | . 45 | . 60 |
| Weight per 100, lbs. |  |  | 19 | 32 | 47 |

BLACK SHORT MALE AND FEMALE DROP ELBOWS-23I5-C.

| Code. | Raffubler | Raffzahn |
| :---: | :---: | :---: |
| Size, inches | 3/8 | 1/2x $3 / 8$ |
| Class. | B | B |
| Each.. | \$0.26 | 40 |
| Weight per 100, lbs | 26 | 40 |

## BLACK LONG MALE AND FEMALE DROP ELBOWS-2314-C.

Drop $21 / 2$ Inches Long.

†GALVANIZED LONG MALE AND FEMALE DROP ELBOWS-2314-C.
Drop $21 / 2$ Inches Long.

| Code. | Rafinar |
| :---: | :---: |
| Size, inches | 3/8 |
| Class ........ | B |
| Each | \$0.45 |
| Weight per | 33 | +Carried in San Francisco only.

MALLEABLE Y'S.

$\dagger 2318$ - C .
Beaded $45^{\circ}$ Y's. $^{\prime \prime}$

$\dagger 2319$ - $\mathbf{C}$.
Plain $60^{\circ} \mathrm{Y}$ 's.

$\dagger 2320-\mathrm{C}$.
Plain $45^{\circ}$ Double $Y^{\prime}$ s.
$\dagger$ PLAIN GALVANIZED $45^{\circ} \mathrm{Y}$ 'S.

| Code | Raflade | Rafleux | Raftsman | Ragache | Ragarum | Ragazza | Rageful |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches...................... | 3/4 | 1 | 11/4 | $11 / 2$ | 2 | 2x11/2 | 2x1 $1 / 2 \times 11 / 2$ |
| Class ............... ................ | B | C | C | C | C | C | C |
| Each. | \$1.10 | 1.20 | 1.30 | 2.00 | 2.50 | 2.50 | 2.50 |
| Weight per 100, lbs............ | 100 | 160 | 180 | 260 | 350 | 350 | 350 |
| Code... |  |  |  | Raggedly | Raggles | Raggravo | Raggrotta |
| Size, inches. |  |  |  | 2x11/2x2 | $21 / 2$ | $21 / 2 \times 2$ | ${ }^{\text {b }}$ |
| Class. |  |  |  | C | C | C | C |
| Each. |  |  |  | \$2.50 | 5.00 | 5.00 | 10.00 |
| Weight per 100, lbs.... |  |  |  | 350 | 650 | 600 | 1400 |

†BEADED BLACK $45^{\circ} \mathrm{Y}$ 'S—2318-C.

| Code $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | Raggruppa | Ragingly | Ragnachar | Ragnahild | Ragnatela | Ragnitello | Ragnuola |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches..................... | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ | $\mathbf{2} 1 / 2$ | $\mathbf{3}$ |
| Class $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | B | C | C | C | C | C | C |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$. | $\$ 0.80$ | .85 | .90 | 1.30 | 1.80 | 3.50 | 7.00 |
| Weight per 100, lbs..... | 100 | 150 | 170 | 250 | 350 | 600 | 1300 |

$\dagger$ PLAIN GALVANIZED $60^{\circ} \mathrm{Y}$ 'S—23I9-C.

| Code | Ragodia | Ragondin | Ragosse | Ragouner |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | $11 / 2$ | 2 | $\mathbf{2 x 1} 1 / 2$ | 2x11/2x2 |
| Class | C | C | C | C |
| Each. | \$2.00 | 2.50 | 2.50 | 2.50 |
| Weight per | 190 | 290 | 225 | 275 |

†PLAIN GALVANIZED $45^{\circ}$ DOUBLE Y'S-2320-C.



In describing Tees the Run is first named, then the Outlet, thus:


PLAIN BLACK TEES-2323-C.

| Cod | Ragstone | aguettes | Ragusano | Raguseas | Ragweed | Ragwool | Ragwork | Rahezado | Rahezar |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/8 | $1 / 4$ | 3/8 | 1/2 | 3/4 | 1 | 1/1/4 | $11 / 2$ | 2 |
| Class. | A | B | B | C | D | D | E | E | E |
| Each. | \$0.11 | . 11 | . 15 | . 16 | . 18 | 26 | 40 | . 55 | 80 |
| Weight per 100, lbs.. | 10 | 14 | 20 | 32 | 46 | 66 | 120 | 160 | 230 |

## BEADED BLACK TEES-2324-C.

| Code. | Rahezeis | Rahmens | Rahmholz | Rah | Rahı | Rahmsack | Rahmtorte | Rahsegel | Raidimes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches........... | $\dagger 1 / 8$ | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 |
| Class................... | A | B | B | C | D | D | E | E | E |
| Each | \$0.13 | . 13 | . 18 | . 19 | . 20 | . 32 | . 48 | 60 | . 90 |
| Weight per 100, lbs. | ..... | 15 | 24 | 34 | 50 | 80 | 140 | 180 | 270 |
| Code |  |  |  | Raidir | Raidiront | Raidissant | Raifort | Raigales | Raigambre |
| Size, inches |  |  |  | $21 / 2$ | 3 | †31/2 | $\pm$ | 5 | +6 |
| Class. |  |  |  | E | E | E | E | E | E |
| Each. |  |  |  | \$1.80 | 2.80 | 3.80 | 5.00 | 9.50 | 13.00 |
| Weight per 100, lbs |  |  |  | 480 | 740 | 1000 | 1350 | 2400 | 3300 |

PLAIN GALVANIZED TEES-2323-C.

| Code | Raigeoir | Raigota | Raigotoso | Raigrases | Raiguiser | Raillardes | Railleront | Raillons |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches............. $\dagger 1 / 8$ | $1 / 4$ | 3/8 | 1/2 | $3 / 4$ | , | $11 / 4$ | $11 / 2$ | $\underline{2}$ |
| Class..................... A | B | B | C | D | D | E | E | E |
| Each ..................... \$0.16 | . 16 | . 19 | . 20 | . 27 | . 40 | 65 | . 85 | 1.25 |
| Weight per 100, lbs... | 15 | 20 | 30 | 47 | 70 | 125 | 160 | 240 |

BEADED GALVANIZED TEES-2324-C.


## MALLEABLE TEES.

PLAIN BLACK REDUCING TEES.

| Code........... | Raitammo | Raitarono |  |  |  |  | Rajadizas | as Rajagrih |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches... | 1/4 $\mathrm{x}^{1 / 8}$ | $1 / 4 \times 3 / 8$ | $3 / 8 \mathrm{X}^{1 / 4} \mathrm{X}^{1 / 4} 3 / 8$ | $3 / 8 \times 1 / 4 \times 3 / 8$ | $3 / 8 x^{1 / 4}$ | $3 / 8 x^{1 / 2}$ | 1/2 $\mathrm{X}^{1 / 4}$ | $1 / 2 \times 3 / 8 \times 3 / 8$ |
| Class | A | B | B | B | B | B | C | C |
| Each | \$0.13 | . 13 | . 18 | . 18 | . 18 | . 18 | 19 | . 19 |
| Weight per 100, lbs... | 12 | 14 | 14 | 17 | 14 | 20 | 21 | 22 |
| Code..................... | Rajahship | Rajanies | Rajoutait | Rajput | Rajustais | Rajuste | Rajustons | S Rakelstok |
| Size, inches............. | 1/2x ${ }^{1 / 8}$ | $1 / 2 \times 3 / 8 \times 1 / 2$ | 1/2 $\times 3 / 8 \times 3 / 4$ | 1/2x ${ }^{\text {3/4 }}$ | $3 / 4 \times 3 / 8 \times 3 / 8$ | $3 / 4 \times 3 / 8 \times 1 / 2$ | $3 / 4 \times 1 / 2 \times 3 / 8$ | $3 / 83 / 4 \times 1 / 2 \times 1 / 2$ |
| Class..................... | C | C | C | C | C | $\mathrm{C}^{\text {a }}$ | C | $\mathrm{C}^{\text {c/2 }}$ |
| Each | \$0.19 | . 19 | . 19 | . 19 | . 20 | . 20 | . 20 | 20 |
| Weight per 100, lbs... | 24 | 28 | 32 | 32 | 39 | 42 | 39 | 43 |
| Code....... | Rakestale | Raketbal | Raketchen | $n \quad$ Rake | tslag | ketspel | Rakketros | Rakshasa |
| Size, inches. | $3 / 4 \times 1 / 4$ | $3 / 4 \times 3 / 8$ | $3 / 4 \times 1 / 2$ |  | 3/8x3/4 | x $1 / 2 \times 3 / 4$ | $3 / 4 \times 1 / 2 \times 1$ | 3/4x1 |
| Class. | C | C | C |  |  | C | C | D |
| Each | \$0.20 | . 20 | . 20 | 2 | 20 | . 20 | . 20 | 20 |
| Weight per 100, lbs... | 36 | 37 | 41 |  | 45 | 46 | $481 / 2$ | 46 |
| Code............... | Ralamente | Raleando | o Ralenti |  | Raleona | Raleurs | Ralhos | Ralinghi |
| Size, inches | $3 / 4 \times 11 / 4$ | 1x $3 / 8 \times 1 / 2$ |  |  | $1 \times 1 / 2 \times 3 / 4$ | $1 \times 3 / 4 \times 3 / 4$ | 1x $1 / 2 \times 3 / 8$ | /8 1x $3 / 4 \times 3 / 8$ |
| Class. |  |  |  |  |  |  | C | C |
| Each | \$0.20 | . 32 | . 32 |  | . 32 | . 32 | . 32 | . 32 |
| Weight per 100, lbs... | 54 | 51 | 65 |  | 63 | 66 | 56 | 57 |
| Code..................... | Rallaban | Rallargo | Ralleggia |  | entano | Rallento | Rallevia | Rallones |
| Size, inches............. | $1 x^{1 / 2} \mathrm{x}^{1 / 2}$ | 1x $3 / 4 \mathrm{x}^{1 / 2}$ | 1x $3 / 8 \times 1$ |  | 1/2x1 | 1x $3 / 4 \times 1$ | 1x ${ }^{1 / 4}$ | $1 \mathrm{x} 3 / 8$ |
| Class ........ | C | C | C |  |  | D | C | C |
| Each | \$0.32 | . 32 | . 32 |  | 32 | . 32 | . 32 | . 32 |
| Weight per 100, lbs... | 61 | 60 | $641 / 2$ |  | 61 | 62 | 54 | 59 |
| Code..................... | Rallonger | Rallumer | Ramagem | Ramag | ious Ram | ailler Ra | amalhada | Ramalhudo |
| Size, inches............. | 1x $1 / 2$ | 1x $3 / 4$ | $1 \times 3 / 8 \times 1 / 4$ | $1 x^{1 / 2} \times$ |  | x11/4 | 1x11/4 | $1 \times 11 / 2$ |
| Class...................... | C | D | C |  |  |  | D | D |
| Each | \$0.32 | . 32 | . 32 | . 32 |  | 32 | . 32 | 32 |
| Weight per 100, lbs... | 62 | 66 | 75 | 781/4 | 81 |  | $84^{1 / 2}$ | 100 |
| Code. | Ramalines |  |  |  |  |  | mastique | Ramatella |
| Size, inches | $11 / 4 \times 1 \times 3 / 8$ | 11/4 $\times 1 \times 1 / 2$ | $11 / 4 \times 1 \times 3 / 4$ | $1 / 4 \quad 11 / 4 \times 3 / 4$ | $3 / 4 \times 3 / 4 \quad 11 / 4$ | x1x1 11/4 | / $\times 3 / 8 \times 11$ | $11 / 4 \times 1 / 2 \times 1$ |
| Class. | D | D | D | D |  | E | D | D |
| Each | \$0.48 | . 48 | . 48 | . 48 |  | 48 | 48 | . 48 |
| Weight per 100, lbs... | 79 | 79 | 89 | 89 |  | 01 | 101 | 98 |
| Code. | Ramazan | Rambades | Rambeh | Ramberg | ge Rambla |  | mblok | Rambootan |
| Size, inches............. | $11 / 4 \times 3 / 4 \times 1$ | $11 / 4 \times 3 / 8$ | $11 / 4 \times 1 / 2$ | $11 / 4 \times 3 / 4$ |  |  | 1/2×11/4 $\mathbf{1}^{11}$ | $11 / 4 \times 3 / 4 \times 11 / 4$ |
| Class........ |  |  | D | D | , |  |  | D |
| Each | \$0.48 | . 48 | . 48 | . 48 | . 48 |  | 48 | . 48 |
| Weight per 100, lbs... | 98 | 76 | 80 | 95 | 104 |  | 20 | 116 |
| Code... | Rambooze | Rambotim | Rambour | Rameal | 1 Rameg | gia Ram | elles R | Ramenable |
| Size, inches | 1/4/41x11/4 | $11 / 4 \times 11 / 2$ | 1/4 $\times 2$ | 1 $1 / 2 \times 1 \times$ | $11^{1 / 2} \times 11 /$ | $4 \times 111 / 2 \times 1$ | $1 \times 11 / 41^{1 / 2}$ | $1 / 2 \times 11 / 4 \times 11 / 4$ |
| Class.. | E | E | E | E | E |  | E | E |
| Each | \$0.48 | . 48 | . 48 | . 60 | . 60 |  | 60 | . 60 |
| Weight per 100, lbs... | 120 | 122 | 1561/4 | 163 | 160 |  | 55 | 152 |
| Code......... | Ramendage | Ramenons | Ramentace | e Ramen | ntos Ramen | ntum Ra | meous ${ }^{\text {R }}$ | Ramequin |
| Size, inches............. | $11 / 2 \times 3 / 8$ | $11 / 2 x^{1 / 2}$ | $11 / 2 \times 3 / 4$ | $11 / 2 \mathrm{x}$ |  |  | D $1 / 2 \times 111 /$ | $11 / 2 \times 3 / 4 \times 11 / 4$ |
| Class..................... | D | D | D | E | E |  |  | D |
| Each | \$0.60 | . 60 | . 60 | . 60 | . 60 |  | 60 | . 60 |
| Weight per 100, lbs... | 102 | 97 | 117 | 132 | 147 |  | 62 | 157 |
| Code..................... | Ramescent | Rameurs | S Ramhout | ut Ram | miferes R | amiflore | Ramify | Ramilaf |
| Size, inches............. | $11 / 2 \times 11 / 4 \times 3 / 4$ | $11 / 2 \times 11 / 4 \times 1$ | $11 / 2 \quad 11 / 2 \times 2$ | $2 \mathrm{2x} 11 / 4$ | x11/4 $\quad 2 \mathrm{x}$ | $11 / 2 \times 11 / 42$ | x11/2×11/2 | $1 / 22 \times 11 / 2 \times 2$ |
| Class.. | D | E | E | E |  | E | E | E |
| Each | \$0.60 | . 60 | . 60 | . 90 |  | . 90 | . 90 | . 90 |
| Weight per 100, lbs... | 137 | 160 | 192 | 21 |  | 214 | 194 | 254 |
| Code... | Ramilhete | Ramillon |  |  |  |  |  |  |
| Size, inches | $\mathbf{2 x} 3 / 8$ | 2x ${ }^{1 / 2}$ | $\mathbf{2 x} 3 / 4$ |  | 2x1 | 2x1/4 | 2x11/2 | $2 \times 21 / 2$ |
| Class. | D | D | D |  | E | E | E | E |
| Each .................... | \$0.90 | . 90 | . 90 |  | 90 | . 90 | . 90 | . 90 |
| Weight per 100, lbs... | 155 | 170 | 183 | 19 | 97 | 214 | 230 | 250 |

In Orders and Specifications give Plate Numbers and Sizes.

MALLEABLE TEES.
BEADED BLACK REDUCING TEES.

| Code | Rammish | Rammklotz | tz Rammoli | i Rammonti | i Ramneos | Ramner | Ramoguato |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. <br> Class $\qquad$ | $\stackrel{1 / 2 x^{1 / 4}}{C}$ | $\stackrel{1 / 2 \times 3 / 8}{C}$ | ${ }_{\mathrm{C}}^{3 / 4} \times 3 / 8$ | ${ }_{\mathrm{C}}^{\frac{3 / 2}{1 / 2}}$ | $\mathrm{Cl}_{\text {C } 3 / 8}$ | $1 x^{1 / 2}$ | $1 \times 3 / 4$ |
| Each | \$0.19 | . 19 | . 20 | . 20 | . 32 | . 32 | . 32 |
| Weight per 100, lbs | 30 | 34 | 45 | 50 | 73 | 75 | 80 |
| Code Size, inches Class ........ | $\begin{aligned} & \text { Ramollir } \\ & 11 / 4 \times 3 / 8 \\ & \mathrm{D} \end{aligned}$ | $\begin{aligned} & \text { Ramonage } \\ & \mathbf{1}_{1 / 4} 1 / 2 \\ & \mathrm{D} \end{aligned}$ | $\begin{aligned} & \text { Ramondies } \\ & 11 / 4 \times 3 / 4 \\ & D \end{aligned}$ | $\begin{aligned} & \text { Ramonelle } \\ & \mathbf{1} / 4 \times 1 \\ & \mathrm{E} \end{aligned}$ | $\begin{aligned} & \text { Ramoneur } \\ & \mathbf{1}_{1 / 2}^{1 / 2} \mathrm{D} \\ & \mathrm{D} \end{aligned}$ | $\underset{\substack{\text { R } \\ 11 / 2 \times 3 / 4 \\ \hline}}{\substack{\text { Ramoon } \\ \hline}}$ | $\begin{aligned} & \text { Ramoruto } \\ & \mathbf{1}_{\mathrm{E} / 2 \mathrm{x}} \end{aligned}$ |
| Each | \$0.48 | . 48 | . 48 | . 48 | . 60 | . 60 | 60 |
| Weight per 100, lbs. | 108 | 112 | 130 | 140 | 124 | 146 | 163 |
| Code Size, inches Class $\qquad$ | $\begin{aligned} & \text { Ramoscello } \\ & \mathbf{1}^{1 / 2 \times 1} \underset{\mathrm{E}}{1 / 4} \end{aligned}$ | $\begin{gathered} \text { Ramosorum } \\ \mathbf{2 x} 3 / 8 \\ \text { D } \end{gathered}$ | m Rampacio $2 \mathrm{x} 1 / 2$ D | us Rampante $2 \times 3 / 4$ D | $\begin{gathered} \text { te } \begin{array}{c} \text { Rampantl } \\ \mathbf{2 x 1} \\ \mathrm{E} \end{array} \end{gathered}$ | tly Ramparts $2 \times 1$ 1/4 <br> E | $\begin{aligned} & \text { Rampeau } \\ & \underset{\mathrm{Ex}}{\mathrm{E}}{ }^{1 / 2} \end{aligned}$ |
| Each | \$0.60 | . 90 | . 90 | . 90 | . 90 | . 90 | . 90 |
| Weight per 100, lbs | 180 | 182 | 199 | 215 | 221 | 255 | 270 |
| Code $\qquad$ Size, inches Class $\qquad$ | $\begin{gathered} \text { Ramphides } \\ \mathbf{2 1 / 2 \times 1} \\ \mathrm{E} \end{gathered}$ | $\begin{aligned} & \text { Ramphine } \\ & \mathbf{2} 1 / 2 \times 1_{\mathrm{E}}^{1 / 4} \end{aligned}$ | $\begin{aligned} & \text { Rampholite } \\ & \mathbf{2}_{\mathrm{E}}^{1 / 2 \times 1} \mathbf{E} 1 / 2 \end{aligned}$ | $\begin{gathered} \text { Rampicava } \\ \mathbf{2}^{1 / 2} \mathbf{E} \mathbf{2} \end{gathered}$ | $\begin{gathered} \text { Rampichet } \\ \text { 3x1 } \\ \text { E } \end{gathered}$ | $\begin{gathered} \text { Rampicone } \\ \mathbf{3 x 1} 1 / 4 \\ \text { E } \end{gathered}$ | $\begin{aligned} & \text { Ramplonas } \\ & \mathbf{3 x 1} \mathbf{E}^{1 / 2} \end{aligned}$ |
| Each | \$1.80 | 1.80 | 1.80 | 1.80 | 2.80 | 2.80 | 2.80 |
| Weight per 100, lbs. | 400 | 410 | 440 | 480 | 750 | 730 | 720 |
| Code Size, inches Class......... |  |  | $\begin{array}{cc} \text { mpogni } & \text { Ran } \\ \mathbf{3 x 2} & \mathbf{3 x} \\ \mathrm{E} & \mathbf{1} \end{array}$ | $\begin{array}{lr} \text { ampojo } & \text { Ram } 1 \\ \mathbf{x 2}^{1 / 2} & 4 \\ \mathrm{E}^{1 / 2} & \end{array}$ | $\begin{aligned} & \text { mponeau } \\ & \mathbf{4 \times 2} \mathrm{E} \end{aligned}$ | $\begin{gathered} \text { Rampostan } \\ \mathbf{4 \times 2} \mathbf{E}^{1 / 2} \end{gathered}$ | $\begin{gathered} \text { Ramshoorn } \\ \mathbf{4 x 3} \\ \text { E } \end{gathered}$ |
| Each. |  | .... \$2 | $2.80 \quad 2$ | 2.805 | 5.00 | 5.00 | 5.00 |
| Weight per 100, lbs. | . | .... 7 | $770 \quad 7$ | $740 \quad 10$ | 1000 | 940 | 1000 |

PLAIN GALVANIZED REDUCING TEES.


## MALLEABLE TEES.


$\dagger 2327$ - 1 。
Female Drop Tee.

†2328-C.
Male and Female Drop Tee.

†2329-1.

Side Outlet Tee.
†PLAIN BLACK FEMALE DROP TEES-2327-C.

| Code $\ldots \ldots \ldots \ldots \ldots \ldots$. | Randagio | Randalies | Randanite | Randlos | Randnoot | Randolfo | Randomly | Randstab |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches $\ldots \ldots \ldots \ldots$. | $3 / 8$ | $1 / 2 \times 3 / 8 \times 3 / 8$ | $1 / 2 \times 3 / 8$ | $1 / 2$ | $3 / 4 \times 1 / 2 \times 3 / 8$ | $3 / 4 \times 3 / 8$ | $3 / 4 \times 1 / 2$ | $3 / 4$ |
| Class $\ldots \ldots \ldots \ldots \ldots \ldots$ | B | B | B | B | C | C | C | C |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | $\$ 0.20$ | .33 | .33 | .33 | .35 | .35 | .35 | .35 |
| Weight per 100, lbs.. | 20 | 29 | 31 | 35 | 41 | 39 | 44 | 50 |

†PLAIN GALVANIZED FEMALE DROP TEES—2327-C.

| Code. | Randvoll | Ranfasto | Ranfione | Rangedor |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | $3 / 8$ | 1/2 | $3 / 4 \times 1 / 2$ | $3 / 4$ |
| Class.. | B | B | C | C |
| Each. | \$0.27 | 48 | . 50 | . 50 |
| Weight per 100 , lbs | 21 | 37 | 44 | 5) |

+PLAIN BLACK MALE AND FEMALE DROP TEES-2328-C.

| Code $\ldots \ldots \ldots \ldots \ldots \ldots$. | Rangeons | Rangeur | Rangfolge | Rangifero | Rangloge | Rangolosa | Rangomela |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches $\ldots \ldots \ldots \ldots$ | $3 / 8$ | $* 3 / 8$ Long | $1 / 2 \times 3 / 8 \times 3 / 8$ | $1 / 2 \times 3 / 8$ | $3 / 4 \times 1 / 2 \times 3 / 8$ | $3 / 4 \times 3 / 8$ | $1 \times 3 / 8$ |
| Class $\ldots \ldots \ldots \ldots \ldots \ldots$ | B | B | B | B | C | C | C |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots$ | $\$ 0.22$ | .26 | .30 | .30 | .32 | .32 | .35 |
| Weight per 100, lbs.. | 22 | 26 | 29 | 30 | 40 | 40 | 5.5 | *Drop $21 / 2$ inches long.

## PLAIN BLACK SIDE OUTLET TEES-2329.C.

| Code ..................... | Rangorde | Rangstolz | Rangstufe | Ranhosa | Ranhura | Ranilhas | Ranimant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches . . . . . . . . . | $\dagger 3 / 8$ | 1/2 | 3/4 | +1 | +11/4 | †11/2 | + |
| Class ..................... | B | B | C | C | C | C | C |
| Each .................... | \$0.22 | . 30 | . 37 | . 4.5 | . 80 | 1.10 | 1.60 |
| Weight per 100, lbs.. | 22 | 30 | 40 | 70 | 130 | 180 | 230 |

## †PLAIN GALVANIZED SIDE OUTLET TEES-2329-C.

| Code | Ranivores | Rankheid | Rankig | Rankling | Ranuesto | Rannosa | Ranonkels |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches ........... | 3/8 | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Class..................... | B | B | C | C | C | C | C |
| Each ................... | \$0.30 | . 45 | . 55 | . 65 | 1.25 | 1.70 | 2.25 |
| Weight per 100, lbs.. | 23 | 32 | 42 | 74 | 140 | 190 | 260 |

## MALLEABLE PIPE FITTINGS.

## MALLEABLE CROSSES.



2332-C.
Plain.


2383-C.
Beaded.

PLAIN BLACK CROSSES-2332-C.

$\qquad$ Rapapolvo
Rapariga Rapassier Rapassome Rapatelle Rapelho $+1 x^{3 / 4} \mathrm{X}^{1 / 2} \mathrm{x}^{1 / 2}$ $1 \times 3 / 4 \times 3 / 4 \times 3 / 4 \quad \dagger 1 \times 3 / 8 \quad \dagger 1 \times 1 / 2 \quad 1 \times 3$

| e, | x |  |  | $+1 \mathrm{X}_{\mathrm{B}}^{1 / 2}$ | $\begin{gathered} 1 \times 3 / 4 \\ B \end{gathered}$ | $+1 / 4 \times 1 \times 3$ | ${ }^{3 / 4}+11 / 4 \times 3 / 4 \times 1 / 4 \times 3 / 8$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Clas | B |  |  |  |  |  |  |
| Each | \$0.39 | . 39 | . 39 |  | . 39 | 39 | 61 |  |  |
| Weight per 100, lbs... | 77 | 77 | 69 | it | 75 | 148 |  |  |
| Code. | Rapetasser | Rapeux | Raphaim | Raph |  | phanus | Raphidia | Raphilite |
| Size, inches. | $\dagger 11 / x^{1 / 2}$ | †11/4 $\mathrm{x}^{3 / 4}$ | 11/4. ${ }^{\text {d }}$ |  |  | 1/2x ${ }^{1 / 2}$ | +11/2 $\mathrm{x}^{3 / 4}$ | $11 / 2 \times 1$ |
| Class. | C | D | D | C |  |  | D | D |
| Each. | \$0.61 | 61 | . 61 | 7 |  | 74 | 74 | 74 |
| Weight per 100, lbs... | 138 | 144 | 140 | 93 |  | 00 | 114 | 124 |
| Code. | Raphipodes | Raphon |  | Rapidez | Rapidolite | Rapidulos | Rapiforme | Rapimmo |
| Size, inches. | +11/2×11/4 | $\dagger 11 / 2 \times 1 / 4 \times 1$ | 1/4 $\times 1$ 1/4 | +2x ${ }^{1 / 2}$ | $\dagger 4 \times 3 / 4$ | 2x1 | $2 \times 1{ }^{1 / 4}$ | $2 \times 11 / 2$ |
| Class. | D |  |  | C | D | D | D | D |
| Each. | \$0.7t | $7 t$ |  | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| Weight per 100, lbs... | 170 | 154 |  | 178 | 198 | 228 | 254 | 270 |

Rapendos

|  | $\dagger$ BEADED BLA |  |
| :---: | :---: | :---: |
| Code. | Rapinabas | Rapinador |
| Size, inches | 3/8 | 1/2 |
| Class. | B | B |
| Each. | \$0.17 | 23 |
| Weight per 100, lbs | 21 | 32 |


| Rapinante | Rapinaran |
| :---: | :---: |
| $3 / 4$ | $\mathbf{1}$ |
| C | C |
| .28 | .39 |
| 54 | 84 |

Rapineux
$\mathbf{1} 1 / 4$
$D$
61
140

Rapingacho
11
$11 / 2$
$D$
74
189
Code............................ ..................... Rapinbar

|  | $\underset{\mathbf{Z}^{2}}{\text { Rapinbar }}$ |
| :---: | :---: |
| Class. | D |
| Each | \$1.20 |
| Weigh | 94 |

## C

C


| Code... | Raponchigo |
| :---: | :---: |
| Size, inches. | 3x1 |
| Class. | D |
| Each. | \$3.00 |

+PLAIN GALVANIZED CROSSES-2332-C.

| Code | tico | Rapparato | Rapparo | Rappelait | Rappelig | Rappiccola | Rappiglia | $\begin{aligned} & \text { Rappists } \\ & \underset{\underline{2}}{1 / 2} \end{aligned}$ | Rapport |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Class | B | B | $\stackrel{+}{\text { C }}$ | C | D | D | D | I) | D |
| Each | \$0.23 | 32 | 42 | 58 | 96 | 1.15 | 1.80 | 4.00 | 5.00 |
| Weight per 100, lbs | 21 | 30 | 58 | 80 | 150 | 180 | 280 | 600 | 800 |

## MALLEABLE REDUCING COUPLINGS.



PLAIN BLACK REDUCERS-2336-C.

| Code. |  |  |  | Rappozzi | Rapsabar | Rapsabo | Rapsamus | Rapsaret |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. |  |  |  | $\dagger^{1 / 4} \mathrm{x}^{1 / 8}$ | $\dagger 3 / 8 x^{1 / 8}$ | $3 / 8 \mathrm{X}^{1 / 4}$ | $\dagger 1 / 2 \mathrm{x} / 4$ | 1/2x3/8 |
| Class........ |  |  |  | A | A | B | B | , |
| Each. |  |  |  | \$0.10 | 15 | 15 | 17 | 17 |
| Weight per 100, lbs |  |  |  | 6 | 12 | 12 | 14 | 15 |
| Code |  |  |  |  | Rapsen | Rapsfeld | Rapsitabo | Rapsitamus |
| Size, inches |  |  |  |  | $\dagger 3 / 4 \times 1 / 4$ | $3 / 4 \times 3 / 8$ | $3 / 4{ }^{1 / 2}$ | $\dagger 1 \times 3 / 8$ |
| Class.. |  |  |  |  | B | B | C | C |
| Each |  |  |  |  | \$0.19 | . 19 | . 19 | 22 |
| Weight per 100, lbs |  |  |  |  | 22 | 20 | 21 | 38 |
| Code |  |  |  | Rapsitaret | Rapsmark |  | Rapsodista |  |
| Size, inches |  |  |  | $1 \mathrm{x} 1 / 2$ | 1x ${ }^{3 / 4}$ | $\dagger 1^{1 / 4} \times 1 / 2$ | $1 / 4 \times 3 / 4$ | $11 / \times 1$ |
| Class....... |  |  |  | C | C | C | D | D |
| Each |  |  |  | \$0.22 | . 22 | . 27 | 27 | 27 |
| Weight per 100, lbs |  |  |  | 41 | 41 | 44 | 44 | 50 |
| Code. |  |  |  |  | Raptando | Raptatura | Raptemur | Raptoras |
| Size, inches |  |  |  | $\dagger 11 / 2 \mathrm{x}^{1 / 2}$ | $11 / 2 \times 3 / 4$ | 1 $1 / 2 \times 1$ | $11 / 2 \times 11 / 4$ | $11 / 2 \times 3 / 8$ |
| Class...... |  |  |  | C | D | D | D | C |
| Each |  |  |  | \$0.32 | . 32 | . 32 | . 32 | . 32 |
| Weight per 100, lbs |  |  |  | 68 | . 64 | 70 | 72 | 70 |
|  | Raptorem |  |  | Rapturize | Rapuglio | Rapulati | Rapulatos | Rapulatum |
| Size, inches.......... | $\dagger 2 \mathrm{x} 1 / 2$ | $2 x^{3 / 4}$ | $\mathbf{2 x 1}$ | 2x11/4 | $\mathbf{2 x 1} 1 / 2$ | 21/2x2 | $\mathbf{3 x}^{\text {2 }}$ | $3 \times 21 / 2$ |
| Class.... |  | D | D | D | D | D | D | D |
| Each | \$0.55 | . 55 | 55 | . 55 | . 55 | . 90 | 1.50 | 1.50 |
| Weight per $100,1 \mathrm{bs}$ | 129 | 125 | 118 | 122 | 125 | 175 | 2341/2 | 250 |

BEADED BLACK REDUCERS-2337-C.

| Code.. | Rapuncio | Rapunzel | Rapuroir | Raqueras | Raquetier | Raquideos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $\dagger 11 / 4 \times 1$ | +3 1/2x ${ }^{\text {2 }}$ | $\dagger 4 \times 2$ | $4 \times 21 / 2$ | $4 \times 3$ | $\dagger 4 \times 31 / 2$ |
| Class. | D | D | D | D | D | D |
| Each | \$0.27 | 2.00 | 2.50 | 2.50 | 2.50 | 2.50 |
| Weight per 100, lbs | 60 | 450 | 570 | 590 | 552 | 550 |

PLAIN GALVANIZED REDUCERS-2336-C.

| Code | Rarebit | Rareeshow | Rarefactif | Rarefazer | Rarefier | Rarekiek | Rareness |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | $\dagger 3 / 8 \times 1 / 4$ | 1/2x3/8 | $3 / 4 \mathrm{x}^{1 / 2}$ | $1 x^{3 / 4}$ | 11/4x1 | $11 / 2 \times 1 / 4$ | 2x11/2 |
| Class.. | B | B | C | C | D | D | D |
| Each | \$0.18 | 20 | . 25 | . 32 | . 40 | 50 | . 85 |
| Weight per 100, lbs ... | 12 | 16 | 22 | 43 | 53 | 75 | 130 |

$\dagger$ BLACK OFFSET REDUCERS, MALE AND FEMALE.

| Code. | Rarescence | Rarescendo | Rarescent | Rarescible | Rarescimus |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1x $3 / 4$ | 11/4 $\times 1$ | $11 / 2 \times 11 / 4$ | 2x11/2 | $21 / 2 \times 2$ |
| Each | \$0.60 | . 70 | . 90 | 1.10 | 1.80 |
| Weight per $100, \mathrm{lbs}$ | 38 | 70 | 75 | 100 | 140 |

[^31]
## MALLEABLE COUPLINGS.



2341-C.
Plain Malleable.


2342-C.
Right and Left-Malleable.


2343-C.
Plain Wrought.

PLAIN BLACK MALLEABLE COUPLINGS-234I-C.

| Code | Rarete | Rarezas | Raridade | Rarifico | Rarifloros |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/8 | 1/4 | $3 / 8$ | 1/2 | 3/4 |
| Class | A | B | B | C | C |
| Each | \$0.08 | . 08 | . 09 | . 12 | 16 |
| Weight per 100, lbs | 3 | 6 | 10 | 15 | 30 |
| Code | Rarifolie | Raripile | Raripilum | Rariplisse | Raritudine |
| Size, inches. | 1 | $11 / 4$ | $11 / 2$ | 2 | $\dagger 21 / 2$ |
| Class | D | D | E | E | E |
| Each. | \$0.22 | . 30 | . 40 | . 55 | ...... |
| Weight per 100, lbs. | 50 | 70 | 80 | 140 | 250 |

PLAIN GALVANIZED MALLEABLE COUPLINGS-234I-C.

| Code.................. | Raritudo | Rarity | Rarosch | Rasabais | Rasados | Rasaminis | Rasbutos | Rascadura |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.......... | $\dagger 1 / 4$ | 3/8 | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ |  |
| Class................... | B | B | C | C | D | D | E | E |
| Each.. | \$0.10 | 12 | 17 | 23 | 34 | 48 | 53 | 87 |
| Weight per 100, lbs | 7 | 11 | 16 | 32 | 53 | 75 | 90 | 150 |

RIGHT AND LEFT BLACK MALLEABLE COUPLINGS-2342-C.

| Code.. | Rascaldom | Rascalism | Rascamono | Rascareis | Rascazon | Rascheln | Raschheit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | 3/8 | 1/2 | $3 / 4$ | 1 | $\dagger 11 / 4$ | $\dagger 11 / 2$ |  |
| Class. | B | C | C | D | D | D | D |
| Each. | \$0.16 | . 18 | 20 | 29 | 52 | 57 | 80 |
| Weight per 100, lbs ... | 16 | 23 | 32 | 55 | 100 | 110 | 150 |

$\dagger$ RIGHT AND LEFT GALVANIZED MALLEABLE COUPLINGS-2342-C.

| Code.............................. | Raschiollo | Rascunhar | Rasenbahn | Rasenbank | Rasengrund | Rasenleger |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches .................... | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ | 2 |
| Class. | C | C | D | D | D | D |
| Each. | \$0.26 | . 30 | 46 | . 85 | . 92 | 1.25 |
| Weight per 100, lbs ........... | $2 \overline{5}$ | 35 | 60 | 110 | 120 | 160 |

BLACK WROUGHT COUPLINGS-2343-C.

| Code | Rasenmal | Rasenplan | Rasenplatz | Rasenrain | Rasensitz | Rasentassi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $\dagger 1 / 4$ | $\dagger 3 / 8$ | +1/2 | $\dagger$ +/4 | $\dagger 1$ | $11 / 4$ |
| Each. | \$0.05 | . 06 | . 07 | . 10 | 13 | 17 |
| Weight per 100, lbs. | $83 / 4$ | 111/4 | 15 | 25 | 40 | 55 |
| Code |  | Rasentato | Rasentavo | Rasentorf | Rasenweg |  |
| Size, inches |  | $11 / 2$ | 2 | $\dagger 21 / 2$ | 3 | $4$ |
| Each. |  | \$0.21 | 28 | . 40 | 60 | 1.00 |
| Weight per 100, lbs. |  | $821 / 2$ | 130 | 1833/4 | 290 | 350 |

†GALVANIZED WROUGHT COUPLINGS-2343-C.


## MALLEABLE RETURN BENDS.


$\dagger \mathbf{2 3 4 6}$ - C. Close Pattern-Banded.

†BLACK BANDED CLOSE PATTERN RETURN BENDS-2346-C.

| Code | Rasitabis | Rasitatos | Rasitavit | Rasoribus | Rasourar | Raspadillo | Raspailar |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.................... | 3/8 | 1/2 | 3/4 | 1 | 1/4/4 | $11 / 2$ | 2 |
| Between Centers, inches... | 7/8 | $11 / 8$ | $13 / 8$ | $13 / 4$ | $21 / 8$ | $21 / 2$ | 3 |
| Class............................ | B | B | C | C | D | D | D |
| Each. | \$0.25 | . 35 | . 45 | . 70 | . 95 | 1.30 | 2.00 |
| Weight per 100, lbs... | 25 | 30 | 70 | 112 | 180 | 233 | 375 |

† BLACK BANDED OPEN PATTERN RETURN BENDS—2347-C.

$\dagger$ GALVANIZED BANDED OPEN PATTERN RETURN BENDS-2347-C.

| Code | Raspeando | Raspelbrot | Raspelspan | Rasphuis | Raspiamo |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $3 / 4$ | 1 | 1/4/4 | $11 / 2$ | 2 |
| Between Centers, inches | 2 | $21 / 2$ | 3 | $31 / 2$ | $41 / 2$ |
| Class... | C | C | D | D | D |
| Each. | \$0.75 | 1.20 | 1.50 | 2.25 | 5.00 |
| Weight per 100, lbs. | 84 | 130 | 200 | 280 | 460 |

PLAIN BLACK CLOSE PATTERN RETURN BENDS-2348-C.

| Code. | Raspilha | Raspzaag | Rasqueta |
| :---: | :---: | :---: | :---: |
| Size, inches | 1/2 | $3 / 4$ | 1 |
| Between Centers, inches | 1 | $11 / 4$ | $11 / 2$ |
| Class | B | C | C |
| Each. | \$0.35 | . 40 | . 50 |
| Weight per 100, lbs.. | 32 | 50 | 80 |

## † PLAIN GALVANIZED CLOSE PATTERN RETURN BENDS-2348-C.

| Code | Rassaggia | Rassalisse | Rassaltano | Rassaltare |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | 1 Right and Left. |
| Between Centers, inches. | 1 | $11 / 4$ | $11 / 2$ | $11 / 2$ |
| Class.. | B | C | C | B |
| Each. | \$0.52 | . 60 | . 75 | 1.10 |
| Weight per 100, lbs.............................. | 40 | 55 | 85 | 85 |

$\dagger$ Carried in San Francisco only.

## MALLEABLE RETURN BENDS.



2349-C.
Close Pattern-Beaded.


2350-C.
Open Pattern-Beaded.

BEADED BLACK OPEN PATTERN RETURN BENDS-2350-C.

| Code | Rassalto | Rassapora |
| :---: | :---: | :---: |
| Size, inches | $3 / 4$ | 1 |
| Between Centers, inches. | 2 | $21 / 2$ |
| Class. | C | C |
| Each. | \$0.50 | . 80 |
| Weight per $100, \mathrm{lbs}$. | 80 | 130 |

† BEADED GALVANIZED OPEN PATTERN RETURN BENDS-2350-C.

| Code | Rassasiant | Rassegando | Rassegare | Rassegato |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1 | 11/4 | $11 / 2$ | 2 |
| Between Centers, inches | $21 / 2$ | 3 | $31 / 2$ | 4 |
| Class. | C | D | D | D |
| Each. | \$1.20 | 1.50 | 2.25 | 4.00 |
| Weight per 100, lbs. | 130 | 200 | 280 | 420 |

BEADED BLACK CLOSE PATTERN RETURN BENDS-2349-C.

| Code............................................ | Rasselmaus | Rasselwerk | Rassembler | Rassembra | Rassicura | Rassigner |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................................... | $\dagger 1 / 2$ | $\dagger 3 / 4$ | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Between Centers, inches................... | $11 / 4$ | $11 / 2$ | 17/8 | 21/4 | 25/8 | $31 / 4$ |
| Class. | B | C | C | D | D | D |
| Each | \$0.40 | . 45 | . 60 | . 80 | 1.30 | 2.00 |
| W'eight per $100, \mathrm{lbs}$ | 40 | 60 | 90 | 150 | 210 | 400 |

BEADED BLACK CLOSE PATTERN RETURN BENDS, RIGHT AND LEFT-2349-C.

| Code........ |  |  |  |  | $\begin{gathered} \text { Rassodarla } \\ \dagger \mathbf{1} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| Between Centers, inches. |  |  |  |  | $\begin{gathered} 17 / 8 \\ 178 \end{gathered}$ |
| Class |  |  |  |  |  |
| Each. |  |  |  |  | \$0.85 |
| Weight per 100 , lbs. |  |  |  |  | 90 |
| †BEADED GALVANIZED CLOSE PATTERN RETURN BENDS-2349-C. |  |  |  |  |  |
| Code.. | Rassodasse | Rassodata |  | Rassodolla |  |
| Size, inches. |  | $1{ }^{1}$ | $\mathbf{1 1 / 4}$ | $11 / 2$ | 2 |
| Between Centers, inches | $11 / 2$ | 17/8 | $21 / 4$ | 25/8 | 31/4 |
| Class................. | C | C | D | D | D |
| Each | \$0.70 | . 90 | 1.20 | 1.95 | 3.25 |
| Weight per 100, lbs.. | 60 | 95 | 155 | 210 | 400 |

BEADED BLACK MEDIUM PATTERN RETURN BENDS. (Not shown)

| Code | Rassurant | Rassurons |
| :---: | :---: | :---: |
| Size, inches. | $3 / 4$ | $\dagger$ +3/4 Right and Left. |
| Between Centers, in | $13 / 4$ | 13/4 |
| Class | C | B |
| Each | \$0.45 | . 65 |
| Weight per 100, lbs | 60 | 60 |

$\dagger$ Carried in San Francisco only.


$2354-\mathrm{C}$. Extension Piece.

PLAIN BLACK CAPS-2352-C.

| Code | Rastejar | Rastellite | Rastiarla | Rastiolla | Rastlager |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/8 | 1/4 | 3/3 | 1/2 | $3 / 4$ |
| Class. | A | B | B | C | ${ }^{+}$ |
| Each. | \$0.07 | . 07 | . 08 | . 11 | . 14 |
| Weight per 100, lbs. | 4 | 5 | 10 | 15 | 25 |
| Code. | Rastloser | Rastolhal | Rastolyte | Rastorten | Rastrallo |
| Size, inches. | 1 | 11/4 | $11 / 2$ | 2 | $21 / 2$ |
| Class. | C | D | D | D | D |
| Each. | \$0.17 | . 26 | . 33 | . 44 | 1.00 |
| Weight per $100, \mathrm{lbs}$. | 33 | 60 | 75 | 100 | 200 |

PLAIN GALVANIZED CAPS-2352-C.

| Code. | Rastrear | Rastrojo | Rastrop | Rasttag | Rasttagen |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Class. | B | B | C | C | C |
| Each | \$0.10 | . 12 | . 16 | 20 | 25 |
| Weight per 100, lbs. | 6 | 11 | 16 | 27 | 35 |
| Code. | Rasuracion | Rasuramos | Rasuraste | Ratably | Rataconer |
| Size, inches. | $11 / 4$ | $11 / 2$ | $\stackrel{2}{\text { 2 }}$ | $\dagger 21 / 2$ | +3 |
| Class. | D | D | D | D | D |
| Each | \$0.40 | . 50 | . 68 | 1.60 | 2.30 |
| Weight per 100 , lbs. | 64 | 80 | 106 | 210 | 300 |

PLAIN SQUARE HEAD BLACK CAPS-2353-C.

| Code. | Rataplan | Ratapoil | Ratazana |
| :---: | :---: | :---: | :---: |
| Size, inches. | 3 | +31/2 | $\pm$ |
| Class. | D | D | D |
| Each. | \$1.50 | 2.00 | 3.00 |
| Weight per | 265 | 350 | 540 |

BLACK EXTENSION PIECES-2354-C.

| Code. | Ratelait | Ratelkous | Ratelmond | Ratelons | Ratenloos | Ratepayer | Rathbar |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $\dagger 3 / 8$ | 1/2 | $3 / 4$ | †1 | †11/4 | $\dagger 11 / 2$ | +2 |
| Class. | B | B | C | C | C | C | C |
| Each | \$0.10 | 20 | 21 | 22 | ........ | ........ | ....... |
| Weight per 100, lbs.. | 9 | 20 | 28 | 34 | 70 | 100 | 120 |

GALVANIZED EXTENSION PIECES-2354-C.

| Code. | Rathgeber | Rathhaus | Rathripe | Rathsam |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $\dagger 3 / 8$ | 1/2 | $3 / 4$ | $\dagger 1$ |
| Class.... | B | B | C | C |
| Each | \$0.13 | 28 | . 31 | . 35 |
| Weight per $100, \mathrm{lbs}$. | 10 | 22 | 30 | 40 |


$2357-6$.


2358 -C.
Lock-nuts, Showing both Faces.

†2359-c.
Female Chandelier Hook.


2360 - ${ }^{\circ}$.
Offset.

## BLACK LOCK-NUTS-2357-C.

| Code. | Rathsbote | Rathsherr | Rathstagen | Rathswahl | Rathumus | Rathymes | Ratifiers | Ratigada |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.............. | 1/8 | 1/4 | $3 / 8$ | 1/2 | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ |
| Class....................... | A | B | B | B | C | C | C | D |
| Each...................... | \$0.06 | . 06 | . 06 | . 07 | . 10 | . 12 | . 17 | 20 |
| Weight per 100, lbs.... | 3 | 4 | 5 | 8 | 18 | 24 | 32 | 44 |
| Code. |  |  |  | Ratiguen | Ratillon | Ratineuse | Rational | Rationary |
| Size, inches |  |  | ......... | 2 | $21 / 2$ | 3 | †31/2 | $\pm$ |
| Class.. |  |  |  | D | D | D | D | D |
| Each. |  |  |  | \$0.33 | . 60 | . 75 | 1.10 | 1.25 |
| Weight per 100, lbs |  |  |  | 75 | 140 | 170 | 250 | 280 |

GALVANIZED LOCK-NUTS-2357-C.

| Code.. | Rationell | Rationnes | Ratissage | Ratline | Ratmara | Ratoncules | Ratonescas |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches... | †1/4 | †3/8 | 1/2 | $\stackrel{34}{4}$ | $\stackrel{1}{\mathrm{C}}$ | ${ }_{\text {11/4 }}$ | ${ }_{\text {1 }}^{1 / 2}$ |
| Class.......... | B | $\begin{array}{r}\text { B } \\ \hline 09\end{array}$ |  |  |  |  |  |
| Weight per 100, lbs. | $\$ 0.09$ 5 | . 09 | 10 | 20 | 18 25 | 26 35 | 32 50 |
| Code Size, inches. Class |  |  | $\begin{gathered} \text { Ratonice } \\ \stackrel{2}{\mathrm{D}} \end{gathered}$ | $\begin{gathered} \text { Ratooned } \\ +21 / 2 \\ \mathrm{D} \end{gathered}$ | $\begin{gathered} \text { Ratouwen } \\ +\mathbf{D} \\ \text { D } \end{gathered}$ | $\begin{gathered} \text { Ratsbane } \\ \dagger 31 / 2 \\ D \end{gathered}$ | $\begin{gathered} \text { Rattaches } \\ +\mathbf{+ 4} \\ \mathrm{D} \end{gathered}$ |
| Each. |  |  | \$0.50 | 1.00 | 1.20 | 1.70 | 2.00 |
| Weight per 100, lbs. |  |  | 80 | 147 | 180 | 260 | 300 |

†BLACK CHANDELIER HOOKS, FEMALE.


PLAIN BLACK OFFSETS.

| Code | Rattenknip | Rattenloch |
| :---: | :---: | :---: |
| Size, inches. | $3 / 4$ | $\dagger 1$ |
| Center to Center, inches | $11 / 2$ | $21 / 2$ |
| Class. | C | C |
| Each | \$0.50 | . 70 |
| Weight per 100, lbs | 65 | 110 |
| +Carried in |  |  |



2362-C.
Waste Nuts.

† 2363-C.
Cross-Overs.

$\dagger$ 2364-C. Hydrant Clamps.

BLACK WASTE NUTS-2362-C.

| Code | Rattentod | Rattenuta | Rattenvolk | Rattenzahn | Rattlewort |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | $\dagger 1 / 4$ | $3 / 8$ | 1/2 | 3/4 | 1 |
| Class....... | B | B | B | B | C |
| Each.. | \$0.08 | . 09 | . 11 | . 14 | . 17 |
| Weight per 100, lbs................................ | 6 | 9 | 10 | 14 | 20 |

TINNED WASTE NUTS-2362-C.

| Code | Rattoppo | Rattornia | Rattorzola | Rattostilo | Rattraggo |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.......................................... | $\dagger 1 / 4$ | $3 / 8$ | 1/2 | 3/4 | 1 |
| Class................................................... | B | B | B | B | C |
| Each. | \$0.12 | . 13 | . 15 | . 20 | . 25 |
| Weight per 100, lbs.. | 6 | 10 | 11 | 15 | 21 |

† GALVANIZED CROSS-OVERS-2363-C.

| Code | Rattrapes | Rattrista | Rattulo |
| :---: | :---: | :---: | :---: |
| Size, inches. | $3 / 4$ | 3/4 | 1 |
| Crosses pipe, inches | 3/4 | 1 | 1 |
| Each. | \$0.32 | . 50 | . 49 |
| Weight per 100 , lbs. | 106 | 110 | 115 |

† BLACK HYDRANT CLAMPS FOR PIPE-2364-C.Code.Tapped for pipe, inch$3 / 8$
Each. ..... $\$ 0.10$
Weight per 100 , lbs. ..... 30

## ASPHALTUM DIPPED FITTINGS.

We can furnish any fittings shown in this catalogue dipped to order.
Prices on application.
$\dagger$ Carried in San Francisco only.

CIRCULATING BOILER FITTINGS.


Boiler Elbows.


2369-C. Union Boiler Elbows.

GALVANIZED BOILER ELBOWS-2368-C

| Code <br> Size, inches | $\begin{aligned} & \text { Raturait } \\ & * 3 / 4 \times 1 / 2 \times 3 / 4 \end{aligned}$ | $\begin{aligned} & \text { Ratureras } \\ & * * \mathbf{1 x} 3 \times 3 / 4 \end{aligned}$ |
| :---: | :---: | :---: |
| Each. | \$0.15 | . 15 |
| Weight per 100, lbs. | 45 | $421 / 2$ |
| * Male end Threaded $3 / 4$-inch and Tapped $1 / 2$-inch; Outlet Tapped $3 / 4$-inch. <br> ** Male " " 1 " " 4 3/4 " " 10 "/4 " |  |  |
| GALVANIZED UNION BOILER ELBOWS-2369-C. |  |  |
| Code <br> Size, inches | $\begin{gathered} \text { Raubadel } \\ * 1 \mathbf{1} 1 / 2 \times 3 / 4 \end{gathered}$ | $\begin{gathered} \text { Raubbau } \\ * * 1 \times 3 / 4 \times 3 / 4 \end{gathered}$ |
| Each. | \$0.45 | . 45 |
| Weight per 100, lbs..... ............................................................... | 98 | 96 |
| * Male end Threaded 1 -inch and Tapped $1 / 2$-inch with 3 -inch Union. <br> ** Male " " 1 " " ${ }^{3}$ 3/4 " " $3 / 4$ " |  |  |



2370-C.
Hexagon Boiler Socket.


2371-C. Union Boiler Socket.

GALVANIZED HEXAGON BOILER SOCKETS-2370-C.


[^32]
## UNION ELBOWS.


$2374-\mathrm{C}$.
With Female Sleeve.


2875-C.
With Male Sleeve.
†BLACK UNION ELBOWS WITH FEMALE SLEEVE-2374-C.


GALVANIZED UNION ELBOWS WITH FEMALE SLEEVE-2374-C.

| Code <br> Size, inches. | $\begin{gathered} \text { Raubschiff } \\ \dagger 1 / 2 \end{gathered}$ | Raubstaat $3 / 4$ | $\begin{aligned} & \text { Raubsucht } \\ & \dagger \mathbf{1} \end{aligned}$ | $\begin{gathered} \text { Raubsystem } \\ \dagger \mathbf{1} 1 / 4 \end{gathered}$ | Raubthier †1 $1 / 2$ | Raubvoge $\dagger 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.63 | . 81 | . 95 | 1.35 | 1.58 | 2.35 |
| Weight per 100, lbs....................... | 49 | $801 / 4$ | 116 | 190 | 262 | 384 |

†BLACK UNION ELBOWS WITH MALE SLEEVE-2375-C.

| Code.......... Size, inches. | Raubvolk $1 / 2$ | Raubwespen 3/4 | Raubwild 1 | Raubwolf $11 / 4$ | Raubzuegen $11 / 2$ | $\begin{gathered} \text { Raubzug } \\ \mathbf{2} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.48 | . 62 | . 72 | 1.05 | 1.20 | 1.80 |
| Weight per 100, 1 | 65 | 883/4 | 1283/4 | 2111/4 | 282 | $4101 / 2$ |

## GALVANIZED UNION ELBOWS WITH MALE SLEEVE-2375-C.

| Code Size, inches | Raucabar $\dagger 1 / 2$ | Raucabo $3 / 4$ | Raucabunt $\dagger \mathbf{1}$ | Raucamente $\dagger 1 \text { 1/4 }$ | Raucavero $\dagger 11 / 2$ | $\begin{aligned} & \text { Raucavisti } \\ & \dagger \mathbf{2} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.72 | . 93 | 1.08 | 1.60 | 1.80 | 2.70 |
| Weight per 100, lb | 65 | 883/4 | 1283/4 | 2111/4 | 282 | $4101 / 2$ |

$\dagger$ Carried in San Francisco only.

## UNION TEES.



2378-C.
With Female Sleeve.


2379 - C.
With Male Sleeve.
†BLACK UNION TEES WITH FEMALE SLEEVE-2378-C.

| Code | Raucedinem | Raucedinis | Raucedo | Raucemus | Raucesco | Raucescunt |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches ......................... | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 |
| Each . | \$0.45 | . 57 | . 70 | . 95 | 1.15 | 1.70 |
| Weight per 100, lbs.............. | $551 / 2$ | 87 | 135 | 216 | 304 | 444 |

## GALVANIZED UNION TEES WITH FEMALE SLEEVE-2378-C.

| Code | Rauchabzug | Rauchaltar | Rauchdicht | Rauchender | Rauchfahne | auchfang |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $\dagger 1 / 2$ | 3/4 | $\dagger 1$ | $\dagger 11 / 4$ | †11/2 | $\dagger 2$ |
| Each | \$0.68 | . 86 | 1.05 | 1.45 | 1.75 | 2.55 |
| Weight per 100, lbs. | $551 / 2$ | 87 | 135 | 216 | 304 | 444 |

†BLACK UNION TEES WITH MALE SLEEVE-2379-C.

| Code.. | Rauchgarbe | Rauchgelb | Rauchgluth | Rauchgrau | Rauchhafer | Rauchholz |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.......................... | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 |
| Each | \$0.52 | . 65 | . 80 | 1.10 | 1.30 | 1.95 |
| Weight per 100, lbs ............... | 62 | $961 / 4$ | 1483/4 | 236 | $3231 / 2$ | 470 |

GALVANIZED UNION TEES, MALE SLEEVE-2379-C.

| Code | Rauchkohle | Rauchkopf | Rauchkugel | Rauchleder | Rauchiock | Rauchlokal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. | $\dagger 1 / 2$ | $3 / 4$ | $\dagger 1$ | †1 $1 / 4$ | $\dagger 1$ 1/2 | $\dagger 2$ |
| Each | \$0.78 | 1.00 | 1.20 | 1.65 | 1.95 | 2.95 |
| Weight per 100, lbs................ | 62 | 961/4 | 1483/4 | 236 | $3231 / 2$ | 470 |

MALLEABLE UNIONS.


2382 -c.
Standard.


2383 -c.
Male and Female.


2384-C.
Male.

| BLACK UNIONS-2382-C. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code. <br> Size inches | Rauchnest 1/8 | Rauchhobel 1/4 | Rauchopfer 3/8 | $\begin{gathered} \text { Rauchqualm } \\ 1 / 2 \end{gathered}$ | Rauchrohr $3 / 4$ | $\begin{gathered} \text { Rauchstaub } \\ 1 \end{gathered}$ | Rauchstube $11 / 4$ |
| Each. | \$0.18 | . 18 | 20 | . 22 | . 27 | 33 | . 46 |
| Weight per 100, lbs........ | 7 | 15 | 22 | 33 | 57 | 80 | 122 |
| Code $\qquad$ Size, inches. |  | Rauchtabak $11 / 2$ | $\begin{gathered} \text { Rauchton } \\ 2 \end{gathered}$ | Rauchtopas 21/2 | $\begin{gathered} \text { Rauchwerk } \\ \mathbf{3} \end{gathered}$ | Rauchwolke $\dagger 31 / 2$ | $\begin{gathered} \text { Rauchzunge } \\ \mathbf{4} \end{gathered}$ |
| Each |  | \$0.58 | . 75 | 1.55 | 2.10 | 3.65 | 4.35 |
| Weight per 100, lbs....... | ......... | 176 | 242 | 385 | 530 | 692 | 843 |

GALVANIZED UNIONS-2382-C.

| Code......... | Rauciamus | Raucidule | Raucidulos | Raucidulum | Rauciebat | Raucisona | Raucous <br> $11 /$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | +1/8 | $1 / 4$ | 3/8 | 1/2 | $3 / 4$ | $1$ | $1^{1 / 4}$ |
| Each | \$0.27 | 27 | . 30 | . 33 | 40 | . 50 | . 70 |
| Weight per 100, lbs. | 7 | 15 | 22 | 33 | 57 | 80 | 122 |
| Code. $\qquad$ Size, inches |  | Raudales $11 / 2$ | $\begin{gathered} \text { Raudanite } \\ \mathbf{2} \end{gathered}$ | Rauderibus $\dagger 21 / 2$ | Raudiva $\dagger 3$ | Rauduscula $\dagger 31 / 2$ | Raufbold $\dagger$ |
| Each |  | \$0.90 | 1.15 | 2.35 | 3.15 | 5.50 | 6.50 |
| Weight per 100, lbs. |  | 176 | 242 | 385 | 530 | 692 | 843 |

†GALVANIZED MALE AND FEMALE UNIONS-2383-C.

$\dagger$ GALVANIZED MALE UNIONS-2384-C.

$\dagger$ Carried in San Francisco only.

## MALLEABLE UNIONS.



* BLACK IMPROVED NATIONAL UNIONS-2387-C.

| Code. | Rauhbank | Rauhbart | Rauherten | Rauhfelsig | Rauhfrost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $\dagger 1 / 4$ | $\dagger 3 / 8$ | 1/2 | $3 / 4$ | 1 |
| Each | \$0.20 | . 24 | . 28 | . 35 | 40 |
| Weight per 100, lbs. | 15 | 20 | 35 | 60 | 90 |
| Code $\qquad$ Size, inches. | Rauhigkeit $\dagger 11 / 4$ | Rauhlinde $\dagger 1$ 1/2 | Rauhkalk $\dagger 2$ | Rauhkorn $+21 / 2$ | Rauhmauer $\dagger 3$ |
| Each . | \$0.56 | . 80 | . 95 | 2.00 | 2.75 |
| Weight per 100, lbs... | 140 | 190 | 270 | 430 | 540 |

*GALVANIZED IMPROVED NATIONAL UNIONS-2387-C.

| Code.. | Rauhreifen | Rauhstein | Rauhwacke | Raulim | Raumanker |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $\dagger 1 / 4$ | $\dagger 3 / 8$ | 1/2 | 3/4 | 1 |
| Each | \$0.24 | . 28 | . 35 | . 46 | . 55 |
| Weight per 100, lbs | 15 | 20 | 35 | 60 | 90 |


| Code. | Raumbett Raumbobrer Raumeisen Raumihano Raumiliare |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 11/7 | 11/2 | $\dagger 2$ | $\dagger \mathbf{2 I}^{1 / 2}$ | $\dagger 3$ |
| Each | \$0.78 | 1.12 | 1.35 | 2.90 | 3.75 |
| Weight per 100, lbs.. | 140 | 190 | 270 | 430 | 540 |

*National Unions have a ring of Anti-corrosive metal as shown in sectional cut above.

$\dagger$ Carried in San Francisco only.

## BUSHINGS.



2391-C.
Style of Reguiar Sizes.

2394.C.

Style of Odd Sizes.

## BLACK BUSHINGS.

| Code | Raupennest | Raupenvolk | Raupig | Rauquant | Rauque | Rauracorum | Rauracos | Raurcarum | Rauschen |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | * 1/4 x 1/8 | * $3 / 8 \times 1 / 8$ | *3/8x1/4 | 1/2x $1 / 8$ | 1/2x1/4 | * $1 / 2 \times 3 / 8$ | $3 / 4 \times 1 / 4$ | $3 / 4 \times 3 / 8$ | *3/4 $\mathrm{x}^{1 / 2}$ |
| Each ................... | \$0.04 | . 04 | . 04 | 04 | . 04 | . 04 | . 05 | . 05 | . 05 |
| Weight per 100, lbs. | 1/4/4 | 3 | $21 / 2$ | 6 | 6 | 41/4 | 10 | 10 | 7 |

$\qquad$ Rauschgold Rauschkorn Rauseramus Rausimus Rausisset Rausso Rautenglas Rautenoel Rautmast

| Size, inches.......... | $\mathbf{1 x} 1 / 4$ | $\mathbf{1 x} 3 / 8$ | $\mathbf{1 x} 1 / 2$ | $* 1 \times 3 / 4$ | $\mathbf{1} 1 / 4 \times 3 / 8$ | $\mathbf{1} / 4 \times 1 / 2$ | $\mathbf{1} 1 / 4 \times 3 / 4$ | $* 11 / 4 \times 1$ | $\mathbf{1} 1 / 2 \times 3 / 8$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots .$. | $\$ 0.06$ | .06 | .06 | .06 | .07 | .07 | .07 | .07 | .09 |
| Weight per 100, lbs. | $153 / 4$ | 17 | 19 | 12 | 25 | $281 / 4$ | $293 / 4$ | 20 | $341 / 2$ |


| Code... | Ravage | Ravageons | Ravageras | Ravageriez | Ravageront | Ravaging | Ravaghone | Ravaillac |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.......... | $11 / 2 \times 1 / 2$ | $11 / 2 \times 3 / 4$ | $11 / 2 \times 1$ | * $11 / 2 \times 11 / 4$ | 2x $3 / 8$ | 2x $1 / 2$ | 2x3/4 | $\mathbf{2 x 1}$ |
| Each | \$0.09 | . 09 | . 09 | . 09 | . 14 | . 14 | . 14 | . 14 |
| Weight per 100 , lbs. | $371 / 2$ | 403/4 | 433/4 | 22 | 50 | $531 / 4$ | 573/4 | 64 |


| Code. Size, inches............. | $\begin{aligned} & \text { Ravalement } \\ & \mathbf{2 \times 1} 1 / 4 \end{aligned}$ | $\begin{aligned} & \text { Ravanese } \\ & \text { * } \mathbf{2 x} 11 / 2 \end{aligned}$ | Ravanger 21/2x3/4 | $\begin{aligned} & \text { Ravastello } \\ & 21 / 2 \times 1 \end{aligned}$ | Ravaudeur $21 / 2 \times 11 / 4$ | Ravebek <br> $21 / 2 \times 11 / 2$ | $\begin{aligned} & \text { Ravekop } \\ & \mathbf{2} 1 / 2 \times 2 \end{aligned}$ | Ravelijnen 3x $3 / 4$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.14 | . 14 | . 21 | 21 | . 21 | 21 | 21 | 30 |
| Weight per 100, lbs. | 50 | 45 | 81 1/4 | $871 / 2$ | $871 / 2$ | 903/4 | 653/4 | 1311/4 |
| Code. Size, inches. | $\begin{aligned} & \text { Ravelins } \\ & \mathbf{3 x 1} \end{aligned}$ | $\begin{aligned} & \text { Ravelment } \\ & \mathbf{3 x 1} 1 / 4 \end{aligned}$ | $\begin{aligned} & \text { Ravenaard } \\ & \mathbf{3 x 1} 1 / 2 \end{aligned}$ | $\begin{aligned} & \text { Ravenaas } \\ & \mathbf{3 x 2} \end{aligned}$ | Ravenelle $3 \times 21 / 2$ | Ravener <br> $31 / 2 \times 11 / 2$ | Ravening $31 / 2 \times 2$ | Ravenkooi $31 / 2 \times 21 / 2$ |
| Each | \$0.30 | . 30 | . 30 | . 30 | . 30 | 40 | 40 | 40 |
| Weight per 100, lbs. | 125 | 125 | $1341 / 2$ | 125 | 130 | 1781/4 | 1561/4 | 175 |


| Code Size, inches............ | Ravenkost $31 / 2 \times 3$ | $4 \times 11 / 2$ | $\begin{aligned} & \text { Ravennesse } \\ & \mathbf{4 \times 2} \end{aligned}$ | $\begin{aligned} & \text { Ravenous } \\ & \mathbf{4 x 2} \mathbf{1} / 2 \end{aligned}$ | $\begin{aligned} & \text { Ravensara } \\ & \mathbf{4 x 3} \end{aligned}$ | Ravenstone $4 \times 31 / 2$ | Ravenzwart $5 \times 4$ | Raverusto $6 \times 5$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.40 | . 50 | . 50 | . 50 | . 50 | . 50 | . 93 | 1.25 |
| Weight per 100, lbs. | 170 | $2121 / 2$ | 1933/4 | 222 | 222 | 230 | 3183/4 | $5591 / 2$ |

## $\dagger$ GALVANIZED BUSHINGS.

| Code | Ravevlerk | Raviceli | Ravicelos |  |  |  | Ravigotan |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | *3/8x ${ }^{1 / 4}$ | * $1 / 2 \times 3 / 8$ | *3/4 $\mathrm{x}^{1 / 2}$ | 1x $3 / 8$ | 1x1/2 | *1x $3 / 4$ | 11/4x ${ }^{3 / 4}$ |
| Each | \$0.08 | . 08 | . 10 | . 12 | . 12 | . 12 | 14 |
| Weight per 100 , lbs.. | $21 / 2$ | $41 / 4$ | 7 | 17 | 19 | 12 | 293/4 |
| Code $\qquad$ Size, inches | $\begin{aligned} & \text { Ravigote } \\ & \text { * } \mathbf{1 / 4} \mathbf{1 / 4} \end{aligned}$ | Ravinala $11 / 2 \times 1$ | $\begin{gathered} \text { Ravines } \\ * 11 / 2 \times 1 / 4 \end{gathered}$ | Ravirons $2 \times 1 / 4$ | $\begin{aligned} & \text { Ravisement } \\ & \text { * } \mathbf{2 x 1} 1 / 2 \end{aligned}$ | $\begin{aligned} & \text { Ravissable } \\ & \mathbf{2 1 / 2 \times 2} \end{aligned}$ | $\begin{aligned} & \text { Ravissais } \\ & \mathbf{3 x 2} \mathbf{1 / 2} \end{aligned}$ |
| Each | \$0.14 | . 18 | . 18 | . 28 | . 28 | . 42 | . 60 |
| Weight per 100, lbs. | 20 | 433/4 | 22 | 50 | 45 | 653/4 | 130 |

[^33]2398-C.
Plugs.

$\dagger$ 2399-C.
Tank Lock Thread.

$\dagger 2400-\mathrm{C}$.
American Long Screw.
BLACK PLUGS-2398-C.

| Code | Ravissant | Ravisses | Ravisseur | Ravissons | Ravotten | Ravulorum | Ravulum | Ravvalora |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/8 | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ |
| Each | \$0.02 | . 02 | . 02 | . 02 | . 03 | 04 | . 05 | . 07 |
| Weight per 100, lbs. | $11 / 2$ | $31 / 2$ | $41 / 2$ | 9 | $121 / 2$ | 21 | 31 | 44 |
| Code. $\qquad$ Size, inches | Ravvelena 2 | Ravvia $21 /$ |  |  | $\begin{aligned} & \text { viliarono } \\ & \dagger \mathbf{\$ 1 / 2} \end{aligned}$ | Ravviassi 4 | Rivviavamo $\dagger 5$ | Ravvicina $\dagger 6$ |
| Each | \$0.10 | 18 | 2 |  | . 38 | . 42 | . 88 | 1.20 |
| Weight per 100, lbs. | 61 | 80 | 14 |  | 180 | 228 | 456 | 602 |

†GALVANIZED PLUGS-2398-C.

| Code |  |  | Ravvierai | Ravvilirei | Ravviliro | Ravvilisci | Ravvilita |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. |  |  | 1/4 | $3 / 8$ | 1/2 | 3/4 | 1 |
| Each |  |  | \$0.04 | . 04 | . 04 | . 06 | . 08 |
| Weight per 100 , lbs |  |  | $31 / 2$ | $41 / 2$ | 9 | $121 / 2$ | 21 |
| Code Size, inches. | Ravviluppa 11/4 | Ravvincere $11 / 2$ | $\begin{gathered} \text { Ravvinco } \\ \mathbf{2} \end{gathered}$ | Ravvio $21 / 2$ | $\begin{gathered} \text { Ravvisata } \\ \mathbf{3} \end{gathered}$ | $\begin{gathered} \text { Ravvinceva } \\ \mathbf{3} 1 / 2 \end{gathered}$ | Rawbone 4 |
| Each | \$0.10 | . 14 | 20 | . 36 | . 50 | . 76 | . 84 |
| Weight per 100, lbs. | 31 | 44 | 61 | 80 | 140 | 180 | 228 |

†BLACK TANK LOCK THREADS—2399-C.
6 inches long. With one Thread 4 inches long.

†GALVANIZED TANK LOCK THREADS-2399-C.
6 inches long. With one Thread 4 inches long.

| Code. $\qquad$ Size, inches. | $\begin{gathered} \text { Rayamos } \\ 1 / 2 \end{gathered}$ | Rayando $3 / 4$ | $\begin{gathered} \text { Rayar } \\ \mathbf{1} \end{gathered}$ | $\begin{gathered} \text { Rayariamos } \\ 11 / 4 \end{gathered}$ | $\begin{aligned} & \text { Rayarian } \\ & 11 / 2 \end{aligned}$ | $\begin{gathered} \text { Rayaron } \\ 2 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.98 | 1.13 | 1.50 | 1.88 | 2.25 | 3.00 |
| Weight per 100, lbs.. | 55 | 80 | 130 | 170 | 190 | 315 |

$\dagger$ BLACK AMERICAN LONG SCREWS-2400-C.
Require no Packing and make a Joint that will not Leak.

| Code | Rayasteis | Raygras | Raymundo | Rayol | Rayonnage | Rayonnait |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 |
| Length, inch | 4 | 4 | $41 / 2$ | 5 | 5 | 5 |
| Length | $51 / 2$ | 6 | 6 | $61 / 2$ | $61 / 2$ | $61 / 2$ |
| Each | \$0.40 | . 55 | . 75 | 1.00 | 1.30 | 1.70 |

$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.


2405-C.
Close Nipple.


2406-C.
Shoulder Nipple.

## BLACK WROUGHT NIPPLES.

| Length in Inches. |  |  |  |  |  | $\begin{aligned} & \text { Size } \\ & \text { Pipe. } \end{aligned}$ | Prices. |  | Length and Prices, Extra Long Nipples. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Close. | Short. | Long. |  |  |  |  | Close Short. | Long. | Inches. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 4 |  |  | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 3/4 | 11/2 | 2 | $21 / 2$ | 3 | $31 / 2$ |  | 1/8 | . 04 | 06 | . 07 | . 08 | . 10 | . 12 | . 14 | . 15 | 17 | . 18 | . 19 |
| 7/8 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 1/4 | . 04 | 06 | . 07 | . 08 | . 10 | . 12 | . 14 | . 15 | . 17 | . 18 | . 19 |
| 1 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | $3 / 8$ | . 04 | . 06 | . 07 | . 08 | . 10 | . 12 | . 14 | . 15 | 17 | . 18 | . 19 |
| 11/8 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 1/2 | . 05 | . 07 | . 08 | . 10 | . 12 | 14 | . 16 | . 18 | 20 | 22 | 23 |
| $13 / 8$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | 3/4 | . 06 | . 09 |  | . 11 | . 13 | . 17 | . 18 | . 20 | 22 | . 24 | 26 |
| $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | 1 | . 08 | . 13 | .... | . 15 | . 18 | 23 | . 25 | . 28 | . 31 | . 34 | 36 |
| 15/8 | $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | $11 / 4$ | . 11 | . 17 |  | . 20 | . 24 | 29 | . 33 | . 36 | . 40 | 44 | 47 |
| 13/4 | $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | $11 / 2$ | . 13 | . 20 |  | . 25 | . 29 | . 36 | . 40 | . 45 | . 50 | . 54 | 59 |
| 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | 2 | . 18 | 27 |  | . 32 | . 38 | . 50 | . 54 | . 59 | . 65 | . 72 | 77 |
| $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | 5 | $21 / 2$ | . 39 | . 59 |  |  | . 68 | . 90 | . 97 | 1.06 | 1.17 | 1.26 | 1.35 |
| $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | 5 | 3 | . 48 | 72 |  |  | . 85 | 1.08 | 1.20 | 1.33 | 1.45 | 1.58 | 1.70 |
| 23/4 | 4 | $41 / 2$ | 5 | $5^{1 / 2}$ | 6 | $31 / 2$ | . 75 | 1.05 |  |  |  | 1.30 | 1.45 | 1.60 | 1.75 | 1.90 | 2.05 |
| 3 | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 | 4 | . 85 | 1.20 |  |  |  | 1.52 | 1.69 | 1.87 | 2.05 | 2.22 | 2.40 |
| $31 / 2$ | $41 / 2$ | 5 | $51 / 2$ | 6 | $61 / 2$ | 5 | 1.55 | 2.45 |  |  |  | 2.58 | 2.83 | 3.10 | 3.35 | 3.60 | 3.85 |
| $31 / 2$ | $41 / 2$ | 5 | $51 / 2$ | 6 | $61 / 2$ |  | 1.85 | 2.90 |  |  |  | 3.05 | 3.35 | 3.70 | 4.00 | 4.30 | 4.65 |

For Telegraphic Code see next page.

## galvanized wrought nipples.

| Length in Inches. |  |  |  |  |  | Size <br> Pipe. | Prices. |  | Length and Prices, Extra Long Nipples. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Close. | Short. | Long. |  |  |  |  | Close Short. | Long. | Inches. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 4 |  |  | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| $3 / 4$ | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ |  | 1/8 | . 06 | 11 | 12 | . 15 | 17 | 21 | 24 | . 26 | 29 | 31 | . 34 |
| 7/8 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | $1 / 4$ | . 06 | 11 | . 12 | . 15 | 17 | 21 | 24 | 26 | 29 | . 31 | . 34 |
| 1 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | $3 / 8$ | . 06 | 11 | . 12 | 15 | 17 | 21 | 24 | 26 | 29 | . 31 | . 34 |
| $11 / 8$ | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 1/2 | . 06 | . 11 | . 13 | 16 | 18 | 23 | 26 | 28 | 31 | . 33 | 36 |
| $13 / 8$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | 3/4 | . 08 | . 14 |  | 18 | . 21 | 26 | 29 | . 32 | 35 | 38 | 41 |
| $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | $1{ }^{1 / 4}$ | . 11 | 19 | ..... | 24 | 28 | . 34 | 38 | . 42 | 47 | . 51 | 55 |
| 15/8 | $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | 11/4 | . 17 | 29 | ..... | . 32 | 38 | 45 | 51 | 57 | . 63 | . 69 | 75 |
| 13/4 | $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | $11 / 2$ | . 21 | . 35 | ...... | . 39 | 46 | 55 | . 63 | 70 | . 77 | . 84 | . 41 |
| 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | $41 / 2$ | 2 | . 27 | . 47 |  | . 52 | 61 | . 74 | . 83 | . 93 | 1.03 | 1.13 | 1.23 |
| 21/2 | 3 | $31 / 2$ | 4 | $41 / 2$ | 5 | $21 / 2$ | . 56 | 86 |  |  | 1.00 | 1.26 | 1.41 | 1.56 | 1.71 | 1.86 | 2.01 |
| 21/2 | 3 | $31 / 2$ | 4 | $41 / 2$ | 5 | 3 | . 70 | 1.10 | ..... |  | 1.30 | 1.60 | 1.80 | 2.00 | 2.20 | 2.40 | 2.60 |
| 23/4 | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 | $31 / 2$ | 1.20 | 1.70 |  |  |  | 2.10 | 2.35 | 2.60 | 2.85 | 3.15 | 3.40 |
| 3 | 4 | $41 / 2$ | 5 | $51 / 2$ | 6 | 4 | 1.35 | 1.87 |  |  |  | 2.30 | 2.60 | 2.90 | 3.20 | 3.50 | 3.80 |

For Telegraphic Code see next page.

## RICHT AND LEFT BLACK NIPPLES.

## LENGTH IN INCHES.



$\begin{array}{llllll}11 / 5 & 11 / 2 & 2 & -1 / 2 & 3 & 0 \\ 13 / 3 & 2 & 1 / 2 & 3 & 31 / 2 & t \\ 11 / 2 & 2 & 21 / 2 & 3 & 31 / 2 & 4\end{array}$
$15 / 501 / 23^{51 / 2} \quad 31 / 2 t^{1 / 2}+1 / 2$
$\begin{array}{lllll}1 / 501 / 2 & 3 & 31 / 2 & 4 & 41 / 2 \\ 13 & 21 / 2 & 3 & 31 / 2 & + \\ 41 / 2 \\ 0 & 21 / 2 & 3 & 31 / 2 & + \\ 4 & & 1 / 2\end{array}$

PRICES.

## Size

Pipe.

| Close or <br> Short. | Long. |
| :---: | :---: |
| .07 | .10 |
| .08 | .12 |
| .11 | .18 |
| .15 | .23 |
| .18 | .27 |
| .24 | .36 |

Length and Prices, Extra Long Nipples.

| Inches. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| . 11 | . 13 | . 16 | . 18 | 21 | 24 | 27 | $2!1$ | . 31 |
|  | . 15 | . 17 | . 23 | . 25 | . 27 | 29 | .3: | 3.) |
|  | . 20 | . 24 | . 31 | . 33 | . 37 | . 41 | .4.) | 48 |
|  | . 27 | . 32 | . 39 | 45) | . 50 | . 5.5 | . 60 | 6.5 |
|  | . $3+$ | . 39 | . 48 | . 22 | . 60 | 67 | T: | . 80 |
|  | . 4 \% | . 51 | . 67 | . 72 | . 80 | . 87 |  | 1.03 |

Add 60 per cent to above prices for Galvanized Nipples, Right and Left.
TELEGRAPHIC CODE FOR BLACK, GALVANIZED AND RIGHT AND LEFT NIPPLES.

| Size | BLACK. |  |  | GALVANIZED. |  |  | RIGHT AND L.EFT. BLACK. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Close. | Short. | Long. | Close. | Short. | Long. | Close. | Short. | Long. |
| 1/8 | Rayonneur | Reaccusar .. | Readopted | Reagreed ... | Reanoint ... | Rearward... | Reasuntos | Rebalade.... | Rehasadero |
| 1/4 | Rayons ... | Reachable .. | Readorn..... | Reagreeing | Reanswer ... | Reascend ... | Reattach... | Rebalajes ... | Rehasando.. |
| \% 3 | Rayosas | Reachest ... | Readorning | Reagudas ... | Reaper ...... | Reasonable | Reattain..... | Rebaleur ... | Rebasaria... |
| 1/2 | Rayuela... | Reachless... | Readunatio | Reagudo..... | Reappeared | Reasoned.... | Reattempt .. | Rebalsadas. | Rebassiner.. |
|  | Razadas. | Reactively .. | Readvance.. | Realisable... | Reappelant | Reasonist ... | Reavow.... | Rebalsamos | Rebatar..... |
| 11/4 | Razaremos. | Reacturi..... | Reaffirm ..... | Realist....... | Reappliy..... | Reasonless.. | Reawake ... | Rebanhada. | Rebatedor..... |
| $11 / 2$ | Razaren .... | Readably ... | Reafforest .. | Realize....... | Reappoint .. | Reassemble | Rebadilha. | Rebannir.... | Rebatiamos |
| 2 | Razarias..... | Readiness .. | Reagamus.. | Reallege .... | Reapposer.. | Reassert ..... | Rebaigner. | Rebannites. | Rebatias..... |
| $21 / 2$ | Razeil | Readjourn .. | Reagebamus ... | Realliance.. | Reapproach .... | Reassign ... | Rebaisser ... | Rebanos.... | Rebatieras.. |
| 3 | Reabonnais | Readjust.... | Reagendos.. | Really ........ | Reargue ..... | Reassumir.. | Rebaixar ... | Rebaptiser. | Rebatiront. |
| $31 / 2$ | Reabonne | Readmettre | Reagentien. | Realm ....... | Rearmement ... | Reassumpto ... | Rebajabas .. | Rebaptise... | Rebatisses .. |
| 4 | Reabonnons..... | Readmission ... | Reagentium | Realmente.. | Rearmost.... | Reasumidos | Rebajadi.... | Rebarbatif.. | Rebatiste... |
| 5 | Reabsorber | Readmit ..... | Reaggravar | Reamless ... | Rearpenter. | Reasuncion | Rebajarian. | Rebarder.... | Rebatosas |
| 6 | Reacciones | Readmitted | Reaggrave. | Reannex .... | Rearrange .. | Reasunta.... | Rebajaron .. | Rebasaban.. | Rebatoso.. |


| Size | BLACK. EXTRA LONG. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4 Inches. | 5 Inches. | 6 Inches. | 7 Inches. | 8 Inches. | 9 Inches. | 10 Inches. | 11 Inches. | 12 Inches. |
| 1/8 | Rebattoir ... | Rebellibus .. | Rebenmost. | Rebinaban | Reblessons.. | Rebocino | Rebordao | Rebouche | Rebramases ... |
| 1/4 | Rebaudir.... | Rebellies ... | Rebenpfahl | Rebinador .. | Rebleuten... | Rebolaria ... | Rebordons. | Rebours... | Rebrameis.. |
| 38 | Rebberg ..... | Rebellious .. | Rebenque ... | Rebinage ... | Reblincado. | Rebolindo... | Reborner.... | Rebouteur .. | Rebrasser... |
| 1/2 | Rebebea ..... | Rebellisch... | Rebenranke | Rebinarian. | Reblincar ... | Rebolipast.. | Rebosada .. | Rebozado .. | Rebreathe. |
| 3/4 | Rebebidas... | Rebellow.... | Rebensorte. | Rebinaste... | Reblinques. | Rebolique... | Rebosadura | Rebozaron.. | Rebridant... |
| 1 | Rebebido.... | Rebelona.... | Rebenstab... | Rebisnieto . | Rebloom..... | Rebolir ...... | Rebosareis.. | Rebozes...... | Rebrodais |
| $11 / 4$ | Rebeca ...... | Rebenacker Rebonbaum | Rebenstock Rebeutinha | Rebitimus.. <br> Rebitunt | Rehlossom <br> Reboabamus | Rebollo $\qquad$ | Rebotaban . | Rebozo $\qquad$ Rebpiahl | Rebrodiez... <br> Rebrodons |
| $2^{11 / 2}$ | Rebeceaism Rebelaras | Rebenbaum Rebencazo | Rebentinha Rebequer | Rebitunt .... Reblanchir | Reboabamus ... <br> Reboabunt | Rebulludo.. | Rebotacion. Rebotador | Rebpfahl .... <br> Rebraced | Rebrodons . Rebrouille |
| $\begin{aligned} & 2 \\ & 21 / 2 \end{aligned}$ | Rebelaras... Rebelde | Rebencazo. Rebendoldes | Rebequer ... <br> Rebezos. | Reblanchir. Reblaubes | Reboabunt . | Rebombar... Rebonabis | Rebotador . Rebotalho | Rebraced.... Rebraco..... | Rebrouille... Rebrousser. |
|  | Rebeldom... | Rebengabel | Rebhuehner | Reblaus...... | Reboatorum .... | Rebondonne.... | Rebotanos. | Rebramaba | Rebrousser. <br> Rehruler ... |
| $31 / 2$ | Rebelim ..... | Rebengott .. | Rebhuhn .... | Reblechon .. | Reboavimus ... | Rebonneter | Rebotaria... | Rebramamos... | Rebsieb ..... |
| 4 | Rebellabar. | Rebengruen | Rebicado.... | Reblessais .. | Rebocado... | Reboquear. | Rebotines... | Rebramando.... | Rebstock.... |
| 5 | Rebellamus | Rebenholz .. | Rebiffer....... | Reblesser ... | Rebocadura | Rebora...... | Rebottage .. | Rebramar... | Rebstueck... |
| 6 | Rebellar ..... | Rebenlaub.. | Rebimba..... | Reblessiez... | Rebocar. | Rebordagem ... | Rebouchage.... | Rebramaron | Rebucous .... |

Size
Pipe,
Inches.

| 4 Inches. | 5 Inches. | 6 Inches. | 7 Inches. | 8 Inches. | 9 Inches. | 10 Inches. | 11 Inches. | 12 Inches. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rebudiaba. | Rebuffade... | Rebullimos. | Reburujeis | Rebutement | Recaigamos | Recaleis... | Recalvorum. | Recandesco |
| Rebudiando .. | Rebuffing.... | Rebullir ... | Reburujo ... | Rebutir | Recaimos... | Recaleniar | Recalvos | Recantabis.. |
| Rebudiar .... | Rebufos... | Rebulliran.. | Reburying.. | Rebuttal...... | Recaisteis... | Recalente | Recalvum. | Recantarem |
| Rebudiaron | Rebuild ...... | Rebulliunt.. | Rebus ..... | Recabada ... | Recaladas .. | Recalesces.. | Recalzaras.. | Recantavit.. |
| Rebuenas.... | Rebujahas... | Rebultadas. | Rebuscadas | Recabaras... | Recalaron.. | Recalfater... | Recalzaste.. | Recanted.... |
| Rebueno..... | Rebujador .. | Rebultado... | Rebuscamos.... | Recabarian. | Recalcabas. | Recaliento.. | Recalzes..... | Recantones |
| Rebufadas... | Rebujaron.. | Reburrium... | Rebuscaron | Recabedo... | Recalcaria.. | Recallable .. | Recalzones. | Recapacito. Recapitule.. |
| Rebufamos. | Rehukable.. | Reburrorum.... | Rebusco ..... | Recacheter.. | Recalciner .. | Recalling .... | Recamara .. | Recaptor .... |
| Rebufarian. | Rebukeful .. | Reburros. | Rebusque.... | Recadar....... | Recalcitro... | Recallment. | Recambiado.. | Recaptura... |
| Rebufaron. | Rebuking ... | Reburujado | Rebutamos. | Recadista ... | Recalculer.. | Recalm | Recambia | Recardant... |
| Rebuff ...... | Rebullida.... | Reburujar... | Rebutasses.. | Recado .. | Recalebat.... | Recaloir | Recambio.... | Recarga...... |

+Carried in San Francisco only.
$\dagger$ RAILING FITTINGS.


BLACK RAILING ELBOWS; SIDE OUTLET-B-24I0-C.

| Code.. | Recasuram | Recasuros | Recataban | Recatada | Recatonazo | Recatonia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Each . | \$0.20 | . 25 | . 30 | . 40 | . 50 | . 80 |
| Weight per $100, \mathrm{lbs} .$. | 30 | 47 | 82 | 110 | 150 | 210 |

BLACK RAILING TEES-C-24II-C.

| Code. | Recaudando | Recaundanza | Recaudaras | Recausais | Recavaste | Recavebunt |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ | 2 |
| Each | \$0.20 | . 25 | . 30 | . 40 | . 50 | . 80 |
| Weight per 100, lbs...................... | 30 | 47 | 81 | 100 | 150 | 210 |

BLACK RAILING TEES, WITH ONE LEFT-HAND THREAD-CC.


## BLACK RAILING TEES, SIDE OUTLET-D-2412-C.

| Code. | Recentabar | Recentada | Recental | Recentando | Recentaras | Recentaval |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................................. | 1/2 | $3 / 4$ | 1 | $11 / 4$ | $11 / 2$ | 2 |
| Each. | \$0.30 | . 35 | . 40 | . 50 | . 60 | 1.00 |
| Weight per 100, lbs...................... | 30 | 47 | 90 | 110 | 140 | 210 |

BLACK RAILING TEES, SIDE OUTLET-DD.
With One Left Hand Thread.


## PLEASE READ THIS NOTE WITH CARE.

To construct a railing two pipes high, the upper outlet of all fittings used in lower pipes should be tapped with left-hand thread, but when orders are sent us without specifying how outlets are to be tapped, all fittings will invariably be furnished right-hand.

As the fittings do not need to be steam or water-tight, a sufficiently clean thread to screw up well and make a good job, can be made by running a left-hand tap into any outlet tapped right-hand.
$\dagger$ Carried in San Francisco only.

## †RAILING FITTINGS.



†2416-c. Cross.

E

†2417-C.
Side Outlet Cross. F

$\dagger$ 2418.c.
Stair Hand Rail Tee. G

$\dagger 2419-\mathrm{c}$. Hinge. H

BLACK RAILING CROSSES-E-2416-C.
Code .......................................................................................

| Recently | Recentring | Recepage | Receper | Recepisse | Receptacle |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| $\$ 0.30$ | .35 | .40 | .50 | .60 | 1.00 |
| 30 | 47 | 90 | 100 | 140 | 220 |

BLACK RAILING CROSSES, SIDE OUTLET-F-24I7-C.

| Code | Receptador | Receptary | Receptasen | Recepteurs | Receptice | Receptinn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................... | 1/2 | $3 / 4$ | 1 | 1/1/4 | $11 / 2$ | 2 |
| Each | \$0.35 | . 40 | . 45 | . 55 | . 75 | 1.35 |
| IVeight per 100, lbs. ...... | 30 | $481 / 2$ | $901 / 2$ | 120 | 160 | 192 |

BLACK STAIR HAND RAIL TEES-G-2418-C.
Adjustable.

| Code | Receptoras | Receptrix | Recessed |
| :---: | :---: | :---: | :---: |
| Size, inches. | 3/4 | 1 | $11 / 4$ |
| Each. | \$0.90 | 1.30 | 2.00 |
| Weight per 100, lbs | 60 | 90 | 160 |

BLACK HINGES FOR PIPE GATE-H-24I9-C.

| Code.. | Recessorum | Recessos | Recetadora | Recetero |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | 1/1/4 |
| Each.. | \$0.70 | . 80 | . 90 | 1.10 |
| Weight per 100, lbs. | 30 | 40 | 60 | 90 |

All Railing Fittings will be shipped with Right Hand Threads unless otherwise ordered. +Carried in San Francisco only.

## †RAILING FITTINGS.

## GLOBE PATTERN


† 2422-C.
Double Foot Rail Bracket.
I

† 2424.C. Stair Hand Rail Cross. K

BLACK DOUBLE FOOT RAIL BRACKETS-I-2422-C.
Grey Iron. $81 / 2$ inches length over all.

| Code. | Recetoria | Recettes | Recevait | Recereur |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | 11/4 |
| Each. | \$0.40 | . 50 | . 70 | . 80 |
| Weight per 100, lbs. | 112 | 180 | 190 | 230 |

BLACK SINGLE FOOT RAIL BRACKETS-J-2423-C.
Grey Iron. $71 / 4$ inches length over all.


BLACK STAIR HAND RAIL CROSSES-K-2424-C.
Adjustable.


All Railing Fittings will be shipped with Right Hand Threads unless otherwise ordered. As these fittings do not need to be steam or water tight, a sufficiently clean thread to screw up well and make a good job can be made by running a left-hand tap into any outlet tapped right-hand.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Sizes and Letters.

## RAILING FITTINGS.

GLOBE PATTERN.


2427-C.
Square Flange-L.

2428.C.

Acorn-M. End for Foot Rail-N.


2430-C.
Round Flange-S.
†BLACK RAILING FLANGES, SQUARE-L-2427-C.

| Code | Rechamum | Rechange | Recharger | Rechasing | Rechassais | Rechassant | Rechassiez R | Rechassons |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................... | 1/4 | $3 / 8$ | 1/2 | 3/4 | 1 | 11/4 | 11/2 | 2 |
| Each ........................... | \$0.10 | . 10 | . 10 | . 12 | . 18 | . 24 | . 30 | . 42 |
| Weight per 100, lbs........ | 18 | 18 | 25 | $311 / 2$ | $461 / 2$ | 109 | 130 | 165 |

†BLACK RAILING ACORNS-M-2428-C.

$\dagger$ BRASS ENDS FOR FOOT RAIL-N-2429-C.

| Code | $\begin{gathered} \text { Recheadura } \\ 1 / 2 \end{gathered}$ | Rechear 3/4 | Rechenbar Rechenbuch Rechenheft |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. |  |  | 1 | 11/4 | 11/2 |
| Each. | \$0.60 | . 70 | . 80 | 1.00 | 1.20 |
| Weight per 100, lbs | $91 / 2$ | 171/4 | 28 | ........ | ... ... |

BLACK ROUND RAILING FLANGES-S-2430-C.

| Code | Rechenmahl Rechenstab Recherches Rechiflado |  |  |  | Rechiflar | Rechifleis | Rechiflo | Rechignard |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................... | 1/4 | $3 / 8$ | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ | $\stackrel{2}{2}$ |
| Diameter of Flange, inches....... | 21/2 | $25 / 8$ | $27 / 8$ | 31/4 | 35/8 | $41 / 8$ | $41 / 2$ | 5 |
| Each | \$0.14 | . 14 | . 15 | . 18 | . 22 | . 25 | . 36 | . 45 |
| Weight per 100, lbs........ | ....... | $301 / 2$ | 48 | 60 | 90 | 130 | $1641 / 2$ | 208 |

$\dagger$ GALVANIZED ROUND RAILING FLANGES-S-2430-C.

| Code. | Rechigne Rechigneux Rechinabas Rechinador Rechinamos Rechinante Rechineis |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $3 / 8$ | 1/2 | 3/4 | 1 | 11/4 | 11/2 | 2 |
| Diameter of Flange, inches. | 25/8 | $27 / 8$ | $31 / 4$ | 35/8 | $41 / 8$ | $41 / 2$ | 5 |
| Each | \$0.28 | . 30 | . 36 | . 44 | . 50 | . 72 | . 90 |
| Weight per $100, \mathrm{lbs}$. |  |  |  |  |  |  |  |

$\dagger$ Carried in San Francisco only.

## †BRASS STEAM FITTINGS.

## IRON PIPE SIZES.


$\dagger \mathbf{2 4 3 3}-\mathrm{C}$.
Elbow.

†2434-C.
Bushing.

|  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.. Code. | $\stackrel{1 / 4}{\text { Rechnung }}$ | en | Rechod | Rechonchas | Rechoncho | $1 / 4$ |  | $\simeq$ |
| Elbows | 17 | 21 | 28 | 35 | 50 | 85 |  |  |
| Code.................Rechtdraa $45^{\circ}$ Elbows.. \$...... | $\begin{gathered} \text { Rechte } \\ .25 \end{gathered}$ |  |  |  |  |  |  |  |
| Code.................Rechthoek Tees......... $\$ 0.15$ | Rechtkame | $\begin{gathered} \text { Rechtli } \\ .30 \end{gathered}$ | Rechtlinig |  |  |  |  | Rechtsbu |
| Code............... Rechtsch Crosses ..... $\$ 0.20$ |  | $\begin{aligned} & \text { Rechtsform } \\ & .40 \end{aligned}$ |  |  |  |  | Rechts |  |
| Code.................Rechtzaak Caps......... $\$ 0.15$ | Rechupete . 15 | $\begin{array}{r} \text { Rechu } \\ .20 \end{array}$ |  |  |  |  |  | $\begin{gathered} \text { ecibinos } \\ 1.10 \end{gathered}$ |
| Code................ Recibos Plugs........ $\$ 0.09$ | Recidebat | Recidit . 12 | $\begin{aligned} & \text { Recidity } \\ & .15 \end{aligned}$ |  |  | Recidiv .40 | Recid | $\begin{gathered} \text { Recidunt } \\ .90 \end{gathered}$ |
| $\begin{aligned} & \text { Code................. Recientes } \\ & \text { Lock-Nuts ... } \$ 0.10 \end{aligned}$ | Recifoso | ecimenter .12 | ecincha <br> .15 |  | Recincheis .30 | Recinc | Recinctum | ecineban |
| Code | Recineron | Recines | Recingeb | Recing | Recingim | Recini | Recinia | ecini |
| Bushings, to reduce one size $\$$ | 10 | . 12 | 14 | 21 | 38 | . 50 | 67 | 0 |
| Code ... | Recipero .16 | $\begin{aligned} & \text { Recipiamus } \\ & .22 \end{aligned}$ | $\begin{gathered} \text { Recipiancy } \\ .32 \end{gathered}$ | Recipiebat . 45 | $\begin{aligned} & \text { Recipients } \\ & .65 \end{aligned}$ | $\begin{gathered} \text { Recipitore } \\ .90 \end{gathered}$ | $\begin{aligned} & \text { cipiunt } \\ & .12 \end{aligned}$ |  |
| Code.................Reciprocar Couplings......... \$0.10 | Reciproque . 14 | $\begin{aligned} & \text { Recisarum } \\ & .16 \end{aligned}$ | Recisionem . 25 | $\begin{aligned} & \text { Recitaculo } \\ & .37 \end{aligned}$ | $\begin{gathered} \text { Recitandos } \\ .50 \end{gathered}$ | $\begin{gathered} \text { Recitasen } \\ .60 \end{gathered}$ |  |  |
| Code. $\qquad$ Return Bend |  |  | Recitavit | Reciteriez . 80 | Reciting | Recitons |  |  |
|  |  |  |  |  |  |  |  |  |
| , inches.. |  | \% |  | 3/4 |  |  |  | 2 |
| Code.................Reckholder Elbows ....... $\$ 0.24$ | Reckless $.34$ | $\begin{gathered} \text { Reckling } \\ .42 \end{gathered}$ | eckon | $\begin{gathered} \text { Reckonir } \\ .70 \end{gathered}$ | eckzeng <br> 1.00 | Reclaim $1.70$ | $\begin{gathered} \text { Reclamabas } \\ 2.20 \end{gathered}$ | $\begin{gathered} \text { eclamante } \\ 3.00 \end{gathered}$ |
| Code $45^{\circ}$ Elbows.. \$..... | Redamaran .42 | $\begin{aligned} & \text { Reclamarlo } \\ & .50 \end{aligned}$ | $\begin{aligned} & \text { eclamasse } \\ & .68 \end{aligned}$ | $\begin{aligned} & \text { Reclamero } \\ & .85 \end{aligned}$ | Reclames $1.25$ | Reclameurs $2.10$ | Reclamiez $2.75$ | clamollo |
| Code.................Reclamper Tees......... $\$ 0.30$ | $\begin{gathered} \text { Reclanges } \\ .40 \end{gathered}$ | $\begin{aligned} & \text { Reclangunt } \\ & .60 \end{aligned}$ | $\begin{aligned} & \text { Reclinado } \\ & .80 \end{aligned}$ |  |  |  |  |  |
| $\begin{aligned} & \text { ode................Reclivarum } \\ & \text { rosses...... } \$ 0.40 \end{aligned}$ | $\begin{gathered} \text { necloua } \\ .60 \end{gathered}$ | $\begin{gathered} \text { ecloyam } \\ .80 \end{gathered}$ | $\begin{gathered} \text { ecloue } \\ 1.00 \end{gathered}$ | $\begin{aligned} & \text { Recluc } \\ & 1.2 \end{aligned}$ | ecludimus |  | $\begin{array}{r} \text { Reclud } \\ 4.00 \end{array}$ | $\begin{array}{r} \text { ecluiam } \\ 7.00 \end{array}$ |
| $\begin{aligned} & \text { Code............... Recluiria } \\ & \text { Caps......... } \$ 0.30 \end{aligned}$ | Reclusabor . 30 | Reclusa . 40 | $\begin{aligned} & \text { cluse } 20 \\ & .50 \end{aligned}$ | clus |  | ecluseris <br> 1.20 | eclusuram |  |
| Code..................eclutamm Plugs ........ $\$ 0.18$ | $\begin{aligned} & \text { no Reclutando } \\ & .20 \end{aligned}$ | do Recluta .24 | $\begin{array}{r} \text { Reclut } \\ .30 \end{array}$ | $\begin{array}{r} \text { Reclut } \\ .40 \end{array}$ | Reclut | $\begin{aligned} & \text { eclu } \\ & .80 \end{aligned}$ | ecoasting | cob |
|  | $\begin{aligned} & \text { ecobr } \\ & .20 \end{aligned}$ | Recob | $.3$ | Recoc |  | is | coo |  |
| $\qquad$ Recodas R | Recoge | $\begin{gathered} \text { coge } \\ .20 \end{gathered}$ | Recog . 25 | Recogites . 30 | ogn |  | Recogn | cogniz |
|  | cogno | Recoil | coina | coja | cola | colad | colar | Recolas |
| ushings, to reduce one size | . 20 | 24 | 28 | 42 | 76 | 1.00 | 1.35 | . 00 |
| educer | $\begin{gathered} \text { Recolec } \\ .32 \end{gathered}$ | $\begin{gathered} \text { Recolet } \\ .44 \end{gathered}$ | $\begin{aligned} & \text { Recolhed } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Recol heito } \\ & .90 \end{aligned}$ | $\begin{gathered} \text { Recolher } \\ 1.30 \end{gathered}$ | $\begin{aligned} & \text { ecolhida } \\ & 1.80 \end{aligned}$ | $\begin{aligned} & \text { Recollect } \\ & 2.25 \end{aligned}$ | $\begin{aligned} & \text { ecollig } \\ & 3.70 \end{aligned}$ |
| de...............Re |  | coltab | oltam | colta | Recoltera | Recoltiez | comb | omb |
| $\begin{aligned} & \text { nions, Ground } \\ & \text { Joint ......... } \$ 0.32 \end{aligned}$ | 36 | 50 | 70 | 90 | 1.25 | 1.70 | 2.50 | 3.60 |
| Code................Recomend Couplings ... $\$ 0.20$ | Recome . 28 | $\begin{aligned} & \text { Recomienda } \\ & .32 \end{aligned}$ | Recommence $.50$ | omm | $\begin{aligned} & \text { ommor } \\ & 1.00 \end{aligned}$ | $\begin{gathered} \text { Recompa } \\ 1.20 \end{gathered}$ | $\begin{gathered} \text { Recompsa } \\ 1.80 \end{gathered}$ | $\begin{aligned} & \text { ecompile } \\ & 2.70 \end{aligned}$ |
| Code............. |  |  | $\begin{aligned} & \text { Recomplete } \\ & 1.20 \end{aligned}$ | $\begin{gathered} \text { Recompo } \\ 1.60 \end{gathered}$ | $\begin{gathered} \text { compose } \\ 2.30 \end{gathered}$ | $\begin{aligned} & \text { ecompt } \\ & 3.50 \end{aligned}$ | Recomptait $5.00$ | $\begin{gathered} \text { Reconca } \\ 7.00 \end{gathered}$ |

[^34]
## CAST IRON ELBOWS.



STRAIGHT SIZES-2440-C.
Code. $\qquad$ Reconcludo Size, inches...... $\begin{array}{cc}1 / 2 & 3 / 4 \\ \$ 0.06 & .08 \\ .30 & .55\end{array}$

| Recondidis | Reconduct |
| :---: | :---: |
| $\mathbf{1} 1 / 4$ | $\mathbf{1 1 / 4}$ |
| $.101 / 2$ | .16 |
| .80 | 1.19 |

$11 / 2$
.20
1.87
$\stackrel{2}{2}$
.28
2.62
Reconfesse
$\mathbf{2 1 / 2}$
.50
5

| Reconfirm | Reconjo |
| :---: | :---: |
| $\mathbf{3}$ | $\mathbf{3} 1 / 2$ |
| .75 | 1.05 |
| 6.43 | 10 |


| Code | Reconning | Reconozcas | Reconquers | Reconquest | Reconsider | Reconsigno | Reconsulte | Recontando |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 4 | $41 / 2$ | 5 | 6 | 7 | 8 | 10 | 12 |
| Each . | \$1.20 | 1.75 | 2.00 | 2.75 | 4.70 | 6.75 | 13.50 | 20.00 |
| Weight each, lbs. | 14.42 | 15.25 | 22.73 | 31.75 | 46.5 | 58 | 103.5 | 160 |

## RIGHT AND LEFT HAND-2440-C.



REDUCING SIZES-2441-C.


Recontar Re $\begin{array}{cccc}3 / 4 \times 1 / 2 & \mathbf{1 \times 3} / 4 & \mathbf{1 \times 1 / 2} & \mathbf{1} 1 / 4 \\ \$ 0.09 & .12 & .12 & 1.12\end{array}$
contemos Re

| $1 \times 1 / 2$ | $11 / 4 \times 1$ | $1 / 4 \times 18$ |
| :---: | :---: | :---: |
| .12 | 18 | 18 |

$11 / 4 \times 3 / 4$
.18
1
$11 / 4$ $1 / 4 x$
18
18
ir Re
$\begin{array}{lcc} \\ \text { converts Reconveyed Reconvid } \\ 1 / 2 \times 11 / 4 & 11 / 2 \times 1 & 11 / 2 \times 3 / 4 \\ .23 & .23 & .23\end{array}$

| Weight each, lbs.... | .5 | .77 | 1.12 | 1.37 | 1 | 1 | 1.75 | 1.5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Code $\qquad$ Recoquille

Recoquin
Size, inches. $2 \times 11 / 2$
$2 \times 1$ 1/4
$2 x$
$\times 1$
cordacao Recordador Recordamur $R$
$\mathbf{2} 1 / 2 \times 2 \quad 21 / 2 \times 11 / 2 \quad 3 \times 21 / 2$
ordance Recordar
Recordatos
$\begin{array}{lllllllllll}\text { Each } . . . . . . . . . . . . . . . . ~ & \$ 0.32 & .32 & .32 & .60 & .60 & .85 & .85 & 1.40 & 1.40\end{array}$
$\begin{array}{llllllllll}\text { Weight each, lbs.... } & 2.37 & 1.75 & 1.75 & 3.25 & 5.19 & 6.5 & 5.5 & 10.5 & 18\end{array}$
$\qquad$ Recorporo Recorrente Recorridos Recortadas Recortaria Recortase

| , | $4 \times 2$ | 5x 4 | $5 \times 3$ | $6 \times 5$ | 6 x 4 | $8 \times 6$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$1.40 | 2.30 | 2.30 | 3.15 | 3.15 | 7.75 |
| Weight each, | 9.12 | 19.5 | 28 | 34.25 | 37.5 | 67 |

45․ SIZES-2442-C.

| Code. | Recorte | Recorvada | Recorvan | Recorvaras | Recosidas | Recostaras | Recostaste | Recottoner |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Each | \$0.07 | . 10 | . 12 | . 19 | . 24 | . 34 | . 60 | 90 |
| Weight each, lbs. | . 34 | . 51 | . 94 | 1.31 | 1.62 | 2.12 | 3.75 | 5.75 |

Code R

Recouched Recouleuse Recoupait Recouperas Recoupions Recouplant Recoupment
Code,
Each
$31 / 2$
$\$ 1.25$

4

## $41 / 2$



6
7
8
Weight each, lbs.
$\begin{array}{llll}\$ 1.25 & 1.45 & 2.20 & 2.50\end{array}$
3.45
$5.90 \quad 8.50$
8.
12.75

17
15.5
25.25

32
42
$\dagger$ Carried in San Francisco only.

## †CAST IRON TEES.

STANDARD

$2445-\mathrm{C}$.
Tee.

$2446-\mathrm{C}$.
Reducing Tee.

2447.C.

Reducing Tee.

In describing Tees, the Rim is first named, then the Outlet, thus:

$$
{ }_{3 / 4}^{1 / 2} \boldsymbol{T}_{3 / 8}^{3 / 2} \times 3 / 8 \times 3 / 4 .
$$

STRAIGHT SIZES-2445-C.


REDUCING SIZES.

| Code. | Size Pipe, Inches. |  | Each. | Code. | Size Pipe Inches. |  | Each. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recourbait. | $1 / 2 \mathrm{x} \quad 1 / 2 \mathrm{x} \quad 3 / 4$ | . 7 | \$0.10 | Recresco................... | $1 \mathrm{xl} \mathrm{x1} 1 / 4$ | 2.5 | \$0.17 |
| Recourbons.. | 1/2x 1/2x1 | . 8 | 10 | Recriaba. | $1 \mathrm{xl} \mathrm{x1} 1 / 2$ | 1.5 | 17 |
| Recourbure | $3 / 4 \times 1 / 2 \mathrm{x} \quad 1 / 2$ | . 8 | 14 | Recriadora. | 1 x 1 x 2 | 3.1 | 17 |
| Recourumes | $3 / 4 \mathrm{x} \quad 1 / 2 \mathrm{x} \quad 3 / 4$ | . 8 | 14 | Recriamos | $11 / 4 \times 1 / 2 \times 11 / 4$ | 1.7 | 27 |
| Recouvrage................. | $3 / 4 \mathrm{x}$ 1/2x1 | 1.3 | 14 | Recriaron | $11 / 4 \times 1 / 2 \mathrm{xl} 1 / 2$ | 2.2 | 27 |
| Recouvrais.................. | $3 / 4 \times 3 / 4 \times 1 / 2$ | . 8 | 14 | Recribler | $11 / 4 \times 3 / 4 \times 3 / 4$ | 1.7 | 27 |
| Recova | $3 / 4 \mathrm{x} \quad 3 / 4 \mathrm{x} 1$ | 1.3 | 14 | Recriminar ........ ....... | $11 / 4 \times 3 / 4 \times 1$ | 2. | 27 |
| Recovagem | $3 / 4 \mathrm{x} \quad 3 / 4 \mathrm{xl} 11 / 4$ | 1.2 | 14 | Recrimino | $11 / 4 \times 3 / 4 \times 11 / 4$ | 1.7 | 27 |
| Recovered. | $3 / 4 \times 3 / 4 \times 11 / 2$ | 1.8 | 14 | Recrossed | $11 / 4 \times 3 / 4 \times 11 / 2$ | 2.2 | 27 |
| Recoveror | $3 / 4 \mathrm{x} \quad 3 / 4 \mathrm{x} 2$ | 3.6 | 14 | Recrotter | $11 / 4 \times 3 / 4 \times 2$ | 3. | 27 |
| Recozer | $1 \times 1 / 2 \times 1 / 2$ | 1.1 | . 17 | Recruit | $11 / 4 \times 1 \times 1 / 2$ | 1.5 | 27 |
| Recra | $1 \times 1 / 2 \times 3 / 4$ | 1. | 17 | Recrujido ..... ............. | $11 / 4 \mathrm{x} 1 \times \mathrm{x} / 4$ | 1.2 | 27 |
| Recreabas | $1 \mathrm{x} \mathrm{1/2xl}$ | 1.5 | 17 | Recrujiera ................. | $11 / 4 \mathrm{x} 1 \mathrm{xl}$ | 1.5 | 27 |
| Recreador | $1 \times 3 / 4 \times 1 / 2$ | 1 | 17 | Recrujimos ......... ....... | $11 / 4 \mathrm{x} 1 \mathrm{x} 11 / 4$ | 1.5 | 27 |
| Recreancy | $1 \times 3 / 4 \times 3 / 4$ | 1.6 | 17 | Recrutador | $11 / 4 \mathrm{x} 1 \mathrm{x} 11 / 2$ | 2.2 | 27 |
| Recrearen | $1 \mathrm{x} \mathrm{3/4} \times 1$ | 1.2 | 17 | Recrutar | $11 / 4 \mathrm{x} 1 \mathrm{x} 2$ | 3. | 27 |
| Recreate | $1 \times 3 / 4 \times 11 / 4$ | 1.5 | 17 | Recrutera | $11 / 4 \mathrm{xl} 1 / 4 \mathrm{x} \mathrm{1/2}$ | 1.2 | 27 |
| Recremabo | $1 \times 3 / 4 \times 11 / 2$ | 1.5 | 17 | Recruteu | $11 / 4 \times 11 / 4 \times 3 / 4$ | 1.5 | 27 |
| Recrepabas | $1 \times 3 / 4 \times 2$ | 3.7 | 17 | Recrutons | $11 / 4 \mathrm{x} 11 / 4 \mathrm{xl}$ | 1.5 | 27 |
| Recrepem | $1 \mathrm{x} 1 \mathrm{x}^{1 / 2}$ | 1. | 17 | Recrutume | $11 / 4 \times 11 / 4 \mathrm{xl} 1 / 2$ | 3. | 27 |
| Recrescer | $1 \times 1 \times 3 / 4$ | 1.1 | . 17 | Rectagona......... ...... | $11 / 4 \times 11 / 4 \times 2$ | 3. | 27 |

+ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.


## †CAST IRON REDUCING TEES-Continued.

| Code. | Size Pipe, Inches. | Weight Each, Lhs. | Each. | Code. | Size Pipe, Inches. | Weight Each, Lbs. | Each. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rectamente | $11 / 2 \times 1 / 2 \times 11 / 4$ | 1.7 | \$0.33 | Recursabo | $21 / 2 \mathrm{x} 2 \mathrm{x} 2$ | 4.6 | \$0.83 |
| Rectangle | $11 / 2 \times 1 / 2 \times 11 / 2$ | 2.2 | + ${ }^{\text {. }}$. 33 | Recursites | $21 / 2 \times 2 \times 21 / 2$ | 7.5 | 83 |
| Recteur. | $11 / 2 \times 3 / 4 \times 3 / 4$ | 3. | . 33 | Recursito | $21 / 2 \mathrm{x} 2 \mathrm{x} 3$ | 8. | 83 |
| Recticorn | $11 / 2 \mathrm{x} \quad 3 / 4 \mathrm{xl}$ | 3. | . 33 | Recursos | $21 / 2 \times 21 / 2 \times 1 / 2$ | 3.5 | 83 |
| Rectidao | $11 / 2 \times 3 / 4 \times 11 / 4$ | 3.3 | . 33 | Recurvabor | $21 / 2 \times 21 / 2 \times 3 / 4$ | 5.1 | 83 |
| Rectificar | $11 / 2 \times 3 / 4 \times 11 / 2$ | 3.3 | . 33 | Recurvamu | $21 / 2 \times 21 / 2 \times 1$ | 4.2 | 83 |
| Rectifico | $11 / 2 \mathrm{x} 3 / 4 \times 2$ | 3.7 | . 33 | Recurvandi | $21 / 2 \times 21 / 2 \times 11 / 4$ | 5 | . 83 |
| Rectifier | $11 / 2 \times 1 \times 1 / 2$ | 1.8 | . 33 | Recurve | $21 / 2 \times 21 / 2 \times 11 / 2$ | 4.7 | . 83 |
| Rectfions | $11 / 2 \times 1 \times 3 / 4$ | 2. | . 33 | Recurvity | $21 / 2 \times 21 / 2 \times 2$ | 6.7 | . 83 |
| Rectiflore | $11 / 2 \mathrm{x} 1 \mathrm{x} 1$ | 1.2 | . 33 | Recurvor | $21 / 2 \times 21 / 2 \times 3$ | 8.5 | 83 |
| Rectifying | $11 / 2 \times 1 \times 11 / 4$ | 2. | . 33 | Recurvou | $21 / 2 \times 21 / 2 \times 4$ | 17. | 83 |
| Rectigrade............... | $11 / 2 \mathrm{x} 1 \quad \mathrm{x} 11 / 2$ | 2.2 | . 33 | Recusable | 3 x 1 x 3 | 7.2 | 1.25 |
| Rectiligne.... ............ | $11 / 2 \mathrm{x} 1 \mathrm{x} 2$ | 2.8 | . 33 | Recusador | $3 \mathrm{x} 11 / 4 \mathrm{x} 3$ | 7.5 | 1.25 |
| Rectilineo ..... .......... | $11 / 2 \times 11 / 4 \times 1 / 2$ | 1.2 | . 33 | Recusamur | $3 \mathrm{x} 11 / 2 \mathrm{x} 2$ | 10. | 1.25 |
| Rectinerne | $11 / 2 \times 11 / 4 \times 3 / 4$ | 2.1 | . 33 | Recusancy | $3 \mathrm{x} 11 / 2 \times 21 / 2$ | 11. | 1.25 |
| Rectitude | $11 / 2 \times 11 / 4 \times 1$ | 1.8 | . 33 | Recus | $3 \mathrm{x} 11 / 2 \mathrm{x} 3$ | 10. | 1.25 |
| Recto | $11 / 2 \times 11 / 4 \times 11 / 4$ | 1.7 | . 33 | Recusave | 3 x 2 x 1 | 8.2 | 1.25 |
| Rectorado | $11 / 2 \times 11 / 4 \times 11 / 2$ | 2.3 | . 33 | Recuser | $3 \mathrm{x} 2 \mathrm{x} 11 / 4$ | 8.2 | 1.25 |
| Rectoress | $11 / 2 \mathrm{x} 11 / 4 \times 2$ | 2.7 | 33 | Recussio | $3 \mathrm{x} 2 \mathrm{x} 11 / 2$ | 8.2 | 1.25 |
| Rectors | $11 / 2 \times 11 / 2 \times 1 / 2$ | 1.5 | 33 | Recussus | 3 x 2 x 2 | 6. | 1.25 |
| Rectorship | $11 / 2 \times 11 / 2 \times 3 / 4$ | 2. | . 33 | Recut | $3 \mathrm{x} 2 \mathrm{x} 21 / 2$ | 8.5 | 1.25 |
| Rectotomie | $11 / 2 \times 11 / 2 \times 1$ | 2.2 | . 33 | Recutione | $3 \mathrm{x} 21 / 2 \mathrm{x} 1$ | 5.7 | 1.25 |
| Rectrix | $11 / 2 \times 11 / 4 \times 11 / 4$ | 1.7 | 33 | Recutioni | $3 \mathrm{x} 21 / 2 \times 11 / 4$ | 7.5 | 1.25 |
| Recuada | $11 / 2 \times 11 / 2 \times 2$ | 3.7 | .33 | Recutitos | $3 \mathrm{x} 21 / 2 \mathrm{x} 11 / 2$ | 5.2 | 1.25 |
| Recuadeir | $2 \times 1 / 2 \times 2$ | 2.7 | 47 | Recut | $3 \mathrm{x} 21 / 2 \mathrm{x} 2$ | 9.5 | 1.25 |
| Recuadrar | $2 \mathrm{x} 3 / 4 \mathrm{x} 11 / 2$ | 3.2 | 47 | Redaccend | $3 \mathrm{x} 21 / 2 \times 21 / 2$ | 7.5 | 1.25 |
| Recuaje. | $2 \mathrm{x} \mathrm{3/4} \mathrm{x} 2$ | 3. | . 47 | Redactada | $3 \mathrm{x} 21 / 2 \mathrm{x} 3$ | 8.2 | 1.25 |
| Recuarta | $2 \mathrm{x} 1 \mathrm{x}^{3} 3 / 4$ | 3.8 | 47 | Redactado | $3 \mathrm{x} 3 \mathrm{x} 3 / 4$ | 6.5 | 1.25 |
| Recubamu | 2 x 1 x 1 | 3.7 | . 47 | Redactamo | 3 x 3 x 1 | 6. | 1.25 |
| Recudis. | $2 \mathrm{x} 1 \mathrm{x} 11 / 4$ | 2.7 | 47 | Redacta | $3 \mathrm{x} 3 \mathrm{x} 11 / 4$ | 8. | 1.25 |
| Recueces | $2 \mathrm{x} 1 \mathrm{x} 1 \mathrm{t} / 2$ | 3.7 | 47 | Redacteur | $3 \mathrm{x} 3 \mathrm{x} 11 / 2$ | 8. | 1.25 |
| Recuentos | 2 x 1 x 2 | 3.6 | 47 | Redactio | 3 x 3 x 2 | 9.7 | 1.25 |
| Recuerdo | $2 \mathrm{x} 11 / 4 \mathrm{x} 3 / 4$ | 2.7 | 47 | Redacto | $3 \mathrm{x} 3 \mathrm{x} 21 / 2$ | 8.5 | 1.25 |
| Recues | $2 \mathrm{x} 11 / 4 \mathrm{x} 1$ | 2.5 | 47 | Redactor | $3 \mathrm{x} 3 \mathrm{x} 31 / 2$ | 17. | 1.25 |
| Recuidar | $2 \times 11 / 4 \mathrm{x} 11 / 4$ | 3.7 | 47 | Redactor | 3 x 3 x 4 | 12. | 1.25 |
| Recuisage | $2 \mathrm{x} 11 / 4 \mathrm{x} 11 / 2$ | 3. | 47 | Redada | $31 / 2 \mathrm{x} 1 \times \mathrm{x} 1 / 2$ | 10.7 | 1.75 |
| Recuisime | $2 \mathrm{x} 11 / 4 \mathrm{x} 2$ | 4.1 | 47 | Redadopt | $31 / 2 \times 11 / 4 \times 31 / 2$ | 10.7 | 1.75 |
| Recuisson | $2 \mathrm{x} 11 / 2 \times 1 / 2$ | 2.8 | 47 | Redadores | $31 / 2 \times 11 / 2 \times 31 / 2$ | 11. | 1.75 |
| Recuit | $2 \mathrm{x} 11 / 2 \mathrm{x} 3 / 4$ | 2.7 | . 47 | Redamapar ................ | $31 / 2 \times 2 \times 31 / 2$ | 11.2 | 1.75 |
| Reculaban | $2 \mathrm{x} 11 / 2 \mathrm{x} 1$ | 3. | 47 | Redamabunt .............. | $31 / 2 \times 21 / 2 \times 2$ | 11.7 | 1.75 |
| Reculam | $2 \mathrm{x} 11 / 2 \times 11 / 4$ | 2.6 | 47 | Redamando | $31 / 2 \times 21 / 2 \times 21 / 2$ | 13.5 | 1.75 |
| Reculass | $2 \mathrm{x} 11 / 2 \mathrm{x} 11 / 2$ | 3 | 47 | Redamaret. | $31 / 2 \times 21 / 2 \times 3$ | 10.5 | 1.75 |
| Reculbium | $2 \mathrm{x} 11 / 2 \mathrm{x} 2$ | 4.5 | . 47 | Redamato | $31 / 2 \times 3$ x1 $1 / 2$ | 10.7 | 1.75 |
| Reculeron | $2 \times 11 / 2 \times 21 / 2$ | 4.7 | . 47 | Redama | $31 / 2 \times 3 \times 2$ | 10.7 | 1.75 |
| Reculeu | 2 x 2 x 1/2 | 2.2 | . 47 | Redamave | $31 / 2 \times 3 \times 21 / 2$ | 9. | 1.75 |
| Reculon | $2 \mathrm{x} 2 \mathrm{x} 3 / 4$ | 2.7 | . 47 | Redambules | $31 / 2 \times 3 \times 3$ | 10.5 | 1.75 |
| Recultiver | 2 x 2 x 1 | 3.7 | 47 | Redambulo | $31 / 2 \times 31 / 2 \times 1$ | 8.5 | 1.75 |
| Recultum | $2 \mathrm{x} 2 \mathrm{x} 11 / 4$ | 3.2 | 47 | Redamen | $31 / 2 \times 31 / 2 \times 11 / 4$ | 8.5 | 1.75 |
| Reculturi. | $\begin{array}{lll}2 & \mathrm{x} 2 & \mathrm{x} 1 \mathrm{I} / 2 \\ 2\end{array}$ | 3.1 | . 47 | Redanho | $31 / 2 \times 31 / 2 \times 11 / 2$ | 9. | 1.75 |
| Recuma | $2 \mathrm{x} 2 \mathrm{x} 21 / 2$ | 4.5 | . 47 | Redanimab | $31 / 2 \times 31 / 2 \times 2$ | 9. | 1.75 |
| Recumbing ......... | 2 x 2 x 3 | 10.5 | . 47 | Redanimes | $31 / 2 \times 31 / 2 \times 21 / 2$ | 11.5 | 1.75 |
| Recuperar. | $21 / 2 \mathrm{x} 3 / 4 \times 21 / 2$ | 7. | . 83 | Redanser | $31 / 2 \times 31 / 2 \times 3$ | 13. | 1.75 |
| Recurabas. | $21 / 2 \times 1 \times 21 / 2$ | 7. | . 83 | Redardesco...... ......... | $31 / 2 \times 31 / 2 \times 4$ | 13.8 | 1.75 |
| Recurage ............ | $21 / 2 \times 11 / 4 \times 2$ | 5. | . 83 | Redargutos................ | 4 x 1 x 4 | 16.5 | 2.00 |
| Recurando.. | $21 / 2 \times 11 / 4 \times 21 / 2$ | 5.7 | . 83 | Redarios.. | $4 \mathrm{x} 11 / 4 \mathrm{x} 4$ | 15. | 2.00 |
| Recuraran | $21 / 2 \times 11 / 2 \times 1$ | 6.5 | 83 83 | Redarium ................. | $4 \times 11 / 2 \mathrm{x} 4$ $4 \mathrm{x} \mathrm{l}^{1 / 2}$ | 11.5 | 2.00 |
| Recuratura | $21 / 2 \times 11 / 2 \times 11 / 4$ | 6.5 | . 83 | Redarmar | $4 \mathrm{x} 2 \mathrm{x} 11 / 2$ | 19.5 | 2.00 |
| Recuravit | $21 / 2 \times 11 / 2 \times 11 / 2$ | 6.5 | . 83 | Redarmas | $4 \mathrm{x} 2 \mathrm{x} 21 / 2$ | 17.7 | 2.00 |
| Recuremus.. | $21 / 2 \times 11 / 2 \times 2$ | 6.7 | . 83 | Redarmato | 4 x 2 x 3 | 16. | 2.00 |
| Recurramos. | $21 / 2 \times 11 / 2 \times 21 / 2$ | 6.8 | . 83 | Redarmem................. | $4 \quad \mathrm{x} 2 \quad \mathrm{x} 4$ | 14.7 | 2.00 |
| Recurrence | $21 / 2 \mathrm{x} 2 \mathrm{x}$ 1/2 | 4. | . 83 | Redarmema | $4 \mathrm{x} 21 / 2 \mathrm{x} 1$ | 13.5 | 2.00 |
| Recurrent. | $21 / 2 \mathrm{x} 2 \mathrm{x} \mathrm{3/4}$ | 4. | . 83 | Redarmemu | $4 \mathrm{x} 21 / 2 \mathrm{x} 11 / 2$ | 17.5 | 2.00 |
| Recurretis. | $21 / 2 \mathrm{x} 2 \mathrm{x} 1$ | 3.7 | . 83 | Redauspico. | $4 \times 21 / 2 \times 2$ | 17. | 2.00 |
| Recurridas. | $21 / 2 \times 2 \times 11 / 4$ | 3.8 | 83 | Redbreast... | $4 \mathrm{x} 21 / 2 \times 21 / 2$ | 17. | 2.00 |
| Recurring.................. | $21 / 2 \times 2 \times 11 / 2$ | 3.7 | . 83 | Redbud..... | $4 \mathrm{x} 21 / 2 \mathrm{x} 3$ | 17. | 2.00 |

$\dagger$ Carried in San Francisco only.

## †CAST IRON REDUCING TEES-Continued.

| Code. | Size Pipe, Inches. | $\begin{aligned} & \text { Weight } \\ & \text { Each, } \\ & \text { Lbs. } \end{aligned}$ | Each. | Code. | Size Pipe, Inches. | $\begin{aligned} & \text { Weight } \\ & \text { Each, } \\ & \text { Lbs. } \end{aligned}$ | Each. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Redburga | $4 \times 21 / 2 \mathrm{x} 4$ | 12.5 | \$2.00 | Redemptory | 5 x 3 x 3 | 22.5 | \$3.50 |
| Redcoat | $4 \times 3 \mathrm{x} 3 / 4$ | 13. | 2.00 | Redemptrix | $\begin{array}{llll}5 & \mathrm{x} 3 & \mathrm{x} 4\end{array}$ | 37 | 3.50 |
| Reddebam | 4 x 3 x1 | 13. | 2.00 | Redencion | 5 x3 x5 | 23. | 3.50 |
| Reddendos | $4 \mathrm{x} 3 \mathrm{x} 11 / 4$ | 13. | 2.00 | Redens | 5 x 4 x 2 | 15 | 3.50 |
| Reddendu | $4 \mathrm{x} 3 \mathrm{x} 1 \mathrm{t} / 2$ | 15. | 2.00 | Reden | $5 \mathrm{x} 4 \times 2 \mathrm{x} / 2$ | 18.7 | 3.50 |
| Reddening | 4 x3 x2 | 17. | 2.00 | Redentur | 5 x4 x3 | 19.5 | 3.50 |
| Redderen | 4 x3 x2 $1 / 2$ | 12.2 | 2.00 | Redentric | 5 x 4 x 4 | 32. | 3.50 |
| Reddider | 4 x3 x3 | 15.8 | 2.00 | Redeposit | 5 x 4 x 5 | 22. | 3.50 |
| Redeblu | 4 x3 x31/2 | 19. | 2.00 | Redeprunk | 5 x5 x11/4 | 22.5 | 3.50 |
| Redebut | 4 x3 x4 | 16. | 2.00 | Rederang | 5 x5 x1 $1 / 2$ | 20.5 | 3.50 |
| Redecill | $4 \times 31 / 2 \times 21 / 2$ | 16. | 2.00 | Rederar | 5 x 5 x 2 | 18.2 | 3.50 |
| Redeco | $4 \mathrm{x} 31 / 2 \times 3$ | 14. | 2.00 | Redergue | 5 x5 x2 $1 / 2$ | 25. | 3.50 |
| Rededi | $4 \mathrm{x} 31 / 2 \times 31 / 2$ | 13.8 | 2.00 | Redergu | 5 x5 x3 | 27.5 | 3.50 |
| Redeem | 4 x $31 / 2 \times 4$ | 13.8 | 2.00 | Redero | 5 x5 x31/2 | 30. | 3.50 |
| Redefai | $4 \mathrm{x} 4 \times \mathrm{x} 3 / 4$ | 11. | 2.00 | Redesatz | $\begin{array}{llll}5 & \mathrm{x} 5 & \mathrm{x} 4\end{array}$ | 33. | 3.50 |
| Redef | $4 \mathrm{x} 4 \mathrm{xl}^{4}$ | 10. | 2.00 | Red | 6 x3 x6 | 33. | 4.60 |
| Re | $4 \mathrm{x} 4 \times 11 / 4$ | 10. | 2.00 | Redespiel | $\begin{array}{llll}6 & \mathrm{x} 4 & \mathrm{x} 6\end{array}$ | 38. | 4.60 |
| Redefigur | $4{ }^{4} \times 4 \mathrm{x} 11 / 2$ | 10.5 | 2.00 | Redestrom | 6 x5 x6 | 41 | 4.60 |
| Redefiler. | 4 x 4 x 2 | 13.5 | 2.00 | Redestu | $\begin{array}{lll}6 & \mathrm{x} 6 & \mathrm{x} 2\end{array}$ | 25.5 | 4.60 |
| Redefluss | $4 \mathrm{x} 4 \times 2 \mathrm{x}$ 1/2 | 15. | 2.00 | Redeton | 6 x6 x2 $1 / 2$ | 25.5 | 4.60 |
| Redefolle. | 4 x 4 x 3 | 13.7 | 2.00 | Redetwist | $\begin{array}{lll}6 & \mathrm{x} 6 & \mathrm{x} 3\end{array}$ | 32.5 | 4.60 |
| Redeform | $4 \mathrm{x} 4 \times 31 / 2$ | 16.5 | 2.00 | Redeuntis | $\begin{array}{lll}6 & \mathrm{x} 6 & \mathrm{x} 4\end{array}$ | 38. | 4.60 |
| Redekundig | $4 \times 4 \quad x 5$ | 23.5 | 2.00 | Redevance | 6 x6 x5 | 41.7 | 4.60 |
| Redekunst. | $4 \times 4 \times 6$ | 33. | 2.00 | Redeveni | $\begin{array}{lll}7 & \mathrm{x} 6 & \mathrm{x} 7\end{array}$ |  | 7.80 |
| Redelehre | $41 / 2 \times 41 / 2 \times 2$ | 14. | 2.95 | Redflowe | $\begin{array}{llll}7 & \mathrm{x} 7 & \mathrm{x} 6\end{array}$ |  | 7.80 |
| Redelicht | $41 / 2 \times 41 / 2 \times 21 / 2$ | 16.5 | 2.95 | Redhalab | 8 x6 x6 | 80. | 11.25 |
| Redelivery | $41 / 2 \times 41 / 2 \times 3$ | 11.7 | 2.95 | Redhal | 8 x6 x8 | 72. | 11.25 |
| Redelust.. | $41 / 2 \times 41 / 2 \times 31 / 2$ | 23. | 2.95 | Redhibea | 8 x8 84 | 56. | 11.25 |
| Redelustig. | $41 / 2 \times 41 / 2 \times 4$ | 13. | 2.95 | Redhibido | 8 x8 x5 | 65. | 11.25 |
| Redemand. | 5 x 2 x 5 | 21.5 | 3.50 | Redhibir | 8 x8 x6 | 73. | 11.25 |
| Redemander | $5 \times 21 / 2 \times 3$ | 22.5 | 3.50 | Redhibo | 9 x 9 x 5 |  | 15.00 |
| Redemising. | $5 \mathrm{x} 21 / 2 \mathrm{x} 4$ | 37. | 3.50 | Redhostio | 10 x8 x8 |  | 22.50 |
| Redemisse.. | $5 \times 21 / 2 \times 5$ | 21.5 | 3.50 | Redicebat | 10 x 10 x8 |  | 22.50 |
| Redemptas. | 5 x 3 x 2 | 20. | 3.50 | Redichas. | $12 \times 8 \times 10$ |  | 33.50 |
| Redempteur..... | $5 \mathrm{x} 3 \mathrm{x} 21 / 2$ | 20. | 3.50 | Redicho'. | $12 \times 12 \times 10$ |  | 33.50 |

Other sizes can be furnished on short notice.
$\dagger$ Carried in San Francisco only.

In Orders and Specifications give Plate Numbers and Sizes.

## CAST IRON CROSSES.



STRAIGHT SIZES-2450-C.

| Code. | Redichomat | Redichomus | Redichonal | Redichonam | Redichonek | Redichopam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/2 | $3 / 4$ | 1 | 11/4 | 11/2 | 2 |
| Each. | \$0.16 | . 22 | . 27 | . 42 | . 53 | 75 |
| Weight each, lbs. | . 54 | . 87 | 1.36 | 2 | 2.72 | 4.72 |
| Code........... Size, inches | $\begin{gathered} \text { Redichorut } \\ \mathbf{2 1 / 2} \end{gathered}$ | Redichose 3 | $\begin{aligned} & \text { Redichotu } \\ & \mathbf{3}^{1 / 2} \text {. } \end{aligned}$ | $\begin{gathered} \text { Redichook } \\ \mathbf{4} \end{gathered}$ | Redichow $41 / 2$ | Redichpar 5 |
| Each. | \$1.30 | 2.00 | 2.70 | 3.15 | 4.60 | 5.50 |
| Weight each, lbs | 7 | 13.5 | 15.5 | 23 | 28 | 35.5 |
| Code $\qquad$ Size, inches. |  | Redichpet 6 | Redichpil $7$ | $\begin{gathered} \text { Redichpop } \\ 8 \end{gathered}$ | Redicket 10 | Redickop $12$ |
| Each |  | \$7.25 | 12.25 | 17.50 | 35.00 | 52.50 |
| Weight each, lbs. | ........ | 48.5 | 81 | 103 | 150 | 240 |

REDUCING SIZES-245I-C.

| Code. | Size Pipe, Inches. | Weight Each, Lbs. | Each. | Code. | Size Pipe, Inches. | Weight Each, Lbs. | Each. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Redicter | $3 / 4 \times 3 / 4 \times 1 / 2 \times 1 / 2$ | 1. | \$ . 25 | Rediscover | $3 \times 3 \times 21 / 2 \times 21 / 2$ | 11. | \$ 2.20 |
| Redictons | $1 \times 1 \times 1 / 2 \times 1 / 2$ | 1.5 | *. 30 | Rediseuses | $31 / 2 \times 31 / 2 \times 21 / 2 \times 21 / 2$ | 12. | 3.00 |
| Rediculo | $1 \times 1 \times 3 / 4 \times 3 / 4$ | 1.5 | . 30 | Redissolve | $31 / 2 \times 31 / 2 \times 3 \times 3$ | 17. | 3.00 |
| Redieram | $11 / 4 \mathrm{x} 11 / 4 \times 1 / 2 \times 1 / 2$ | 2. | . 46 | Reditones | $4 \times 4 \times 11 / 4 \times 11 / 4$ | 9. | 3.50 |
| Rediezmo | $11 / 4 \times 11 / 4 \times 3 / 4 \times 3 / 4$ | 2. | . 46 | Redituable | $4 \times 4 \times 11 / 2 \times 11 / 2$ | 9.5 | 3.50 |
| Redigebar | $11 / 4 \mathrm{xl} 1 / 4 \mathrm{x} 1 \mathrm{x} 1$ | 2.2 | . 46 | Redituar | $4 \times 4 \times 2 \times 2$ | 10. | 3.50 |
| Redigeon | $11 / 2 \mathrm{x} 1^{1 / 4} \mathrm{x} 1 \mathrm{x} 1$ | 3.3 | . 60 | Redituro | $4 \times 4 \times 21 / 2 \times 21 / 2$ | 16. | 3.50 |
| Redigimar | $11 / 2 \times 11 / 2 \times 1 / 2 \times 1 / 2$ | 3. | . 60 | Rediviam | $4 \times 4 \times 3 \times 3$ | 15. | 3.50 |
| Redigir. | $11 / 2 \times 11 / 2 \times 3 / 4 \times 3 / 4$ | 3.2 | . 60 | Redivi | $4 \times 4 \times 31 / 2 \times 31 / 2$ | 17 | 3.50 |
| Redimamo | $11 / 2 \times 11 / 2 \mathrm{xl}$ x1 | 3.1 | . 60 | Redivisio | $5 \times 5 \times 2 \times 2$ | 23. | 6.00 |
| Redimessi. | $11 / 2 \times 11 / 2 \times 11 / 4 \times 11 / 4$ | 3. | . 60 | Redizimar | $5 \times 5 \times 21 / 2 \times 21 / 2$ | 24. | 6.00 |
| Redimevat | $2 \times 2 \times 3 / 4 \times 3 / 4$ | 4.5 | . 83 | Redlich | $5 \times 5 \times 3 \times 3$ | 25. | 6.00 |
| Redimiamo | 2 x 2 x 1 x 1 | 4.5 | . 83 | Redlicher | $5 \times 5 \times 4 \times 4$ | 33. | 6.00 |
| Redimiate | $2 \mathrm{x} 2 \mathrm{x} 11 / 4 \mathrm{xl} 1 / 4$ | 3.2 | . 83 | Redmiddel | $6 \times 6 \times 2 \times 2$ | ..... | 8.00 |
| Redimibile | $2 \mathrm{x} 2 \mathrm{x} 11 / 2 \mathrm{x} 11 / 2$ | 3.7 | . 83 | Redner. | $6 \times 6 \times 21 / 2 \times 21 / 2$ |  | 8.00 |
| Redimida | $21 / 2 \times 2 \times 11 / 2 \times 11 / 2$ | 7.7 | 1.45 | Redoblado | $6 \times 6 \times 3 \times 3$ | 32. | 8.00 |
| Redimidora | $21 / 2 \times 21 / 2 \times 3 / 4 \times 3 / 4$ | 9. | 1.45 | Redoblant | $6 \times 6 \times 31 / 2 \times 31 / 2$ |  | 8.00 |
| Redimieron | $21 / 2 \times 21 / 2 \mathrm{x} 1 \times 1$ | 9.5 | 1.45 | Redoblaron | $6 \times 6 \times 4 \times 4$ | 39. | 8.00 |
| Rediminish | $21 / 2 \times 21 / 2 \times 11 / 4 \times 11 / 4$ | 9.7 | 1.45 | Redoblo | $6 \times 6 \times 5 \times 5$ |  | 8.00 |
| Redimiran | $21 / 2 \times 21 / 2 \times 11 / 2 \times 11 / 2$ | 6.5 | 1.45 | Redoblone | $7 \times 7 \times 5 \times 5$ |  | 13.50 |
| Redimitur | $21 / 2 \times 21 / 2 \times 2 \times 2$ | 7.5 | 1.45 | Redobra | $7 \times 7 \times 6 \times 6$ |  | 13.50 |
| Redinduti. | $3 \times 3 \times 3 / 4 \times 3 / 4$ | 8. | 2.20 | Redolebit. | $8 \times 8 \times 6 \times 6$ | 87 | 19.25 |
| Redingo | $3 \quad \mathrm{x} 3 \quad \mathrm{x} 1 \mathrm{x} 1$ | 8.2 | 2.20 | Redolemo | $8 \times 8$ x 7 x 7 |  | 19.25 |
| Redinha | $3 \mathrm{x} 3 \mathrm{x} 1 \times 4 \times 11 / 4$ | 8.5 | 2.20 | Redoleras | 10 x10 x 7 x 7 |  | 38.50 |
| Rediront | $3 \mathrm{x} 3 \mathrm{x} 11 / 2 \times 11 / 2$ | 9. | 2.20 | Redolerian | $12 \mathrm{xl2}$ x 8 x 8 |  | 58.00 |
| Redisburse. | 3 x 3 x 2 x 2 | 8. | 2.20 | Redolores | $12 \mathrm{xl2}$ x10 x 10 |  | 58.00 |

$\dagger$ Carried in San Francisco only.

## CAST IRON FITTINGS.


$+2454 . \mathrm{C}$.
Cap.

$\dagger 2455-\mathrm{C}$.
Lock-Nut.

† 2456.C.
Reducer.

| CAST IRON CAPS-2454-C. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code. <br> Size, inches | $\underset{\mathbf{2}}{\text { Redoma }}$ | $\begin{aligned} & \text { Redomadas } \\ & \mathbf{2} 1 / 2 \end{aligned}$ | $\begin{gathered} \text { Redomazos } \\ \mathbf{3} \end{gathered}$ | $\begin{aligned} & \text { Redomitos } \\ & \mathbf{3} 1 / 2 \end{aligned}$ | Redomoinho $4$ | $\text { - } \underset{4}{41 / 2}$ | $\begin{gathered} \text { Redonabunt } \\ 5 \end{gathered}$ |
| Each | \$0.26 | . 40 | . 54 | . 75 | . 87 | 1.05 | 1.20 |
| Weight each, lbs. | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 7 | 8.5 |
| Code $\qquad$ Size, inches. |  | Redonamus <br> 6 | Redonando 7 |  | $\begin{aligned} & \text { onatura } \\ & 8 \end{aligned}$ | Redonavit $10$ | Redondance 12 |
| Each |  | \$1.55 | 2.50 |  | 2.85 | 5.50 | 7.00 |
| Weight each, lbs. |  | 16 | 16.5 |  | 23 | 35.3 | 71.3 |

CAST IRON LOCK-NUTS-2455-C.

| Code. $\qquad$ <br> Size, inches. $\qquad$ | Redondeado | $\begin{aligned} & \text { Redondear } \\ & \mathbf{2}^{1 / 2} \end{aligned}$ | $\underset{\text { Redondella }}{ }$ | $\begin{aligned} & \text { Redondilho } \\ & \mathbf{3} 1 / 2 \end{aligned}$ | Redondo 4 | Redonnais $41 / 2$ | $\underset{\overline{5}}{\text { Redonnant }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.25 | . 27 | . 34 | . 47 | . 64 | . 85 | . 90 |
| Weight each, lbs........ | .. | $\ldots$ | $\ldots$ | $\ldots$ |  | ... |  |
| Code $\qquad$ Size, inches.. | $\begin{gathered} \text { Redonniez } \\ \mathbf{6} \end{gathered}$ |  | Redonnons $7$ | Redopelo 8 | Redoptavit 10 |  | Redoptemur 12 |
| Each. |  | \$1.30 | 1.70 | 2.35 |  | 3.00 | 4.00 |
| Weight each, lbs...... |  | ...... | $\ldots$ | .. |  | ...... |  |

## CAST IRON REDUCERS-2456-C.

| Code. Size, inches | Redorais 2×1 $1 / 2$ | $\begin{aligned} & \text { Redorasses } \\ & \mathbf{2} 1 / 2 \times 1 \end{aligned}$ |  | $\begin{aligned} & \text { Redormimus } \\ & \mathbf{2} 1 / 2 \times \mathbf{1}_{1 / 2}^{1 / 2} \end{aligned}$ | Redormir $21 / 2 \times 2$ | $\begin{aligned} & \text { Redormiunt } \\ & \mathbf{3 x} \mathbf{1} \end{aligned}$ | $\begin{aligned} & \text { Redornabar } \\ & \mathbf{3 \times 1 1 / 4} \end{aligned}$ | Redornaret $\mathbf{3 x} 11 / 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.43 | . 60 | . 60 | . 60 | . 60 | . 80 | . 80 | . 80 |
| Weight each, lbs ..... | ... |  | .. |  | ... | ... |  |  |
| Code $\qquad$ <br> Size, inches $\qquad$ | $\begin{aligned} & \text { Redornatos } \\ & \mathbf{3 \times 2} \end{aligned}$ | $\begin{aligned} & \text { Redorons } \\ & \mathbf{3 x 2} \mathbf{2} / 2 \end{aligned}$ | Redotation $3^{1 / 2 \times 1} 1 / 2$ | $\begin{array}{ll} \text { on } & \text { Redoublais } \\ \mathbf{2} & \mathbf{3} 1 / 2 \times 2 \end{array}$ | is $\begin{aligned} & \text { Redouble } \\ & \mathbf{3} 1 / 2 \mathbf{x} \mathbf{1} / 2\end{aligned}$ |  | $\begin{aligned} & \text { Redoutable } \\ & \mathbf{4 \times 1} 1 / 2 \end{aligned}$ | $\begin{aligned} & \text { Redoutais } \\ & \mathbf{4 \times 2} \mathbf{2} \end{aligned}$ |
| Each | \$0.80 | . 80 | 1.00 | 1.00 | 1.00 | 1.00 | 1.35 | 1.35 |
| Weight each, lbs..... | ... | $\ldots$ |  | ...... | ..... |  | 7.5 | 6.5 |
| Code. | Redoutes | Redoutiez | Redoutons | Redraft R | Redramos | Redraramos | Redrarian | Redraron |
| Size, inches........... | $4 \times 21 / 2$ | 4 x 3 | $4 \times 31 / 2$ | $41 / 2 \times 4$ | $5 \times 3$ | $5 \times 31 / 2$ | 5x4 | $5 \times 41 / 2$ |
| Each | \$1.35 | 1.35 | 1.35 | 1.85 | 2.00 | 2.00 | 2.00 | 2.00 |
| Weight each, lbs.... | 7.4 | 6.4 |  | 7.75 | 13.5 | 10.7 | 10.5 | 10.5 |

Code $\qquad$ Redrawing Re
Size, inches........

Each $\mathbf{6 x 2} \quad \mathbf{6 x 2} 1 / 2$

Weight each, lbs.
$\$ 2.7$
.70
2.70
$\mathbf{6 x}$
${ }^{1}$ resse Re
$\dagger$ Carried in San Francisco only

## CAST IRON PLUGS AND BUSHINGS.


$\dagger 2459$ - .
Plug.

$\dagger 2460$ - $\mathbf{C}$.
Bushing.

CAST IRON PLUGS-2459-C.


Note--For smaller sizes see page 599.
CAST IRON BUSHINGS-2460-C.

| Code... | Redtails | Reddubb | Reducendu | Reductabo | vit | Reductif | Reductives | Reduirai |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $31 / 2 \times 1$ | $31 / 2 \times 11 / 4$ | $4 \times 1$ | $4 \times 11 / 2$ | $41 / 2 \times 2$ | $41 / 2 \times 21 / 2$ | $41 / 2 \times 3$ | $41 / 2 \times 31 / 2$ |
| Each | \$0.40 | . 40 | . 50 | . 50 | . 75 | . 75 | . 75 | . 75 |
| Weight each, lbs.. |  | 3.25 | 4.62 | 2.25 | ...... | 3.25 | 3.25 | 4.12 |
| Code........................... | Reduisais | Reduit | Redujera | Redulceres | Redumes | Reduncorum | Reduncos | Redundabas |
| Size, inches................... | $41 / 2 \times 4$ | $5 \times 2$ | $5 \times 21 / 2$ | $5 \times 3$ | $5 \times 31 / 2$ | $5 \times 41 / 2$ | $6 \times 2$ | $6 \times 21 / 2$ |
| Each | \$0.75 | . 93 | . 93 | . 93 | . 93 | . 93 | 1.25 | 1.25 |
| Weight each, lbs. | 4.75 | 3.62 | 3.75 | 3.62 | 3.62 | 5.5 | 5.5 | 5.5 |


| Cod | Redunda | edunda | edund | edunden | edupli | Redupliq | edure | Redusses |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $6 \times 3$ | $6 \times 31 / 2$ | $6 \times 4$ | $6 \times 41 / 2$ | $7 \times 2$ | $7 \times 21 / 2$ | $7 \times 3$ | 7x31/2 |
| Each | \$1.25 | 1.25 | 1.25 | 1.25 | 1.87 | 1.87 | 1.87 | 1.87 |
| Weight each, | 6 | 5.75 | 10 | 7.75 | 7.75 | 7.25 | 7 | 8.25 |


| Code. | Redussion | Reduviaru | eduvides | Reduvio | Reduviole R | Reduviosos R | Reduxeram |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $7 \times 4$ | $7 \times 41 / 2$ | $7 \times 5$ | $7 \times 6$ | $8 \times 2$ | $8 \times 3$ | $8 \times 4$ |
| Each | \$1.87 | 1.87 | 1.87 | 1.87 | 2.75 | 2.75 | 2.75 |
| Weight each, lbs. | 7.87 | 8.5 | 7.25 | 7.75 | ...... | 10 | 9.78 |
| Code. Size, inches |  |  |  | $\begin{aligned} & \text { Reduzca } \\ & \mathbf{8 \times 5} \end{aligned}$ | $\begin{aligned} & \text { Reduzicao } \\ & 8 \times 6 \end{aligned}$ | $\begin{gathered} \text { Reduzivel } \\ 8 \times 7 \end{gathered}$ | Reeders $10 \times 4$ |
| Each . |  |  |  | \$2.75 | 2.75 | 2.75 | 3.75 |
| IVeight each, lbs. |  |  |  | 8 | 8.5 | 12 | ...... |



Note-Other sizes listed on page p 598 .
†Carried in San Francisco only.

## CAST IRON FLANGE UNIONS.


$\dagger 2463$ - .

## BLACK FLANGE UNIONS

Faced. No Gasket.

| Code. | Reegeit | Reeksen | Reelaiah | Reencher | Reengagies |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ |
| Number of bolts. | 3 | .) | 3 | 3 or 4 | 3 or 4 |
| Diameter of Flange, inches | $2^{1 / 1 / 6}$ | $3 / \sqrt{16}$ | $35 / 8$ | $41 / 8$ | 45/16 |
| Each. | \$0.40 | . 46 | . 52 | . 64 | . 78 |
| Weight each, lbs.. | 1.2 | 1.3 | 1.8 | 2.5 | 5.8 |
| Code |  | Reengancho | Reengendro | Reengrener | Reensayado |
| Size, inches |  | 2 | $21 / 2$ | 3 | $31 / 2$ |
| Number of bolts |  | 4 | 4 | 4 | 4 |
| Diameter of Flange, inches |  | 51/16 | 55/8 | $63 / 16$ | 7 |
| Each |  | \$1.00 | 1.25 | 1.50 | 1.80 |
| Weight each, lbs. |  | 8 | 9.5 | 11 | 13.5 |
| Code.. | Reensayar | Reenter | Reenvidar | Reenvite | Reepangel |
| Size, inches | 4 | $41 / 2$ | 5 | 6 | 7 |
| Number of bolts. | 5 | 4 | 5 | 6 | 6 |
| Diameter of Flange, inches | $71 / 2$ | $83 / 8$ | $91 / 8$ | 105/16 | 117/8 |
| Each. | \$2.10 | 2.70 | 3.15 | 3.95 | 5.50 |
| Weight each, lbs.. | 16 | 19 | 23.5 | 30.5 | 43.5 |
| Code.. |  |  | Reepmaker |  |  |
| Size, inches. |  |  | 8 | 10 | 12 |
| Number of bolts |  |  | 6 or 8 | 9 | 11 |
| Diameter of Flange, inches |  |  | 13 | 153/4 | $171 / 2$ |
| Each.. |  |  | \$7.00 | 11.50 | 16.00 |
| Weight each, lbs. |  |  | 47.5 | 90 | 113 |

GALVANIZED FLANGE UNIONS.
Faced. No Gasket.

$\dagger$ Carried in San Francisco only.
†CAST IRON FLANGES.
SCREWED. NOT DRILLED.


2465-C.
COMMON FLANGES. EACH.

| Size of Pipe. |  |  | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 | 5 | 6 | 7 | 8 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4 | inches . | 22 | 22 | 16 | 16 |  |  |  |  |  |  |  |  |  |  |  |
|  | $41 / 2$ |  | 25 | 25 | . 25 | 25 | 22 |  |  |  |  |  |  |  |  |  |  |
|  | 5 |  | . 35 | . 30 | . 30 | 30 | . 30 | . 35 |  |  |  |  |  |  |  |  |  |
|  | $51 / 2$ |  | . 45 | . 45 | . 40 | . 40 | . 40 | . 35 | . 40 | .... |  |  |  |  | ...... |  |  |
|  | 6 |  | . 50 | . 50 | . 42 | . 40 | . 40 | . 42 | . 42 | . 50 | ...... |  |  |  | ...... |  |  |
|  | $61 / 2$ |  | 65 | . 60 | . 60 | . 60 | . 55 | . 50 | . 50 | . 50 | . 65 |  |  |  |  |  |  |
| - | 7 |  | . 75 | . 75 | . 75 | . 70 | . 70 | 62 | . 62 | . 62 | . 75 |  |  |  |  | ....... |  |
|  | $71 / 2$ | " 6 | . 90 | . 90 | . 90 | . 85 | . 85 | . 80 | 80 | . 75 | . 85 | . 90 |  |  |  |  |  |
|  | 8 | " | 1.00 | 1.00 | 1.00 | . 95 | . 95 | . 90 | . 90 | . 90 | . 90 | . 90 |  |  |  |  |  |
|  | $81 / 2$ | " | 1.25 | 1.25 | 1.25 | 1.15 | 1.15 | 1.10 | 1.10 | 1.10 | 1.00 | 1.00 |  |  |  |  |  |
|  | 9 |  |  |  | 1.35 | 1.35 | 1.35 | 1.30 | 1.25 | 1.15 | 1.15 | 1.15 | 1.40 |  |  |  |  |
| $\pm$ | $91 / 2$ | " |  |  |  | 1.90 | 1.90 | 1.75 | 1.75 | 1.60 | 1.60 | 1.50 | 1.50 | 1.50 |  |  |  |
| \% | 10 | " |  |  |  | 2.25 | 2.25 | 2.15 | 2.00 | 1.80 | 1.50 | 1.50 | 1.50 | 1.50 |  |  |  |
| 0 | 11 | " |  |  |  |  |  | 2.50 | 2.50 | 2.25 | 2.25 | 2.00 | 1.75 | 1.75 | 2.20 |  |  |
|  | 12 |  |  |  |  |  |  |  | 3.00 | 3.00 | 2.75 | 2.50 | 2.20 | 2.20 | 2.20 | 2.80 |  |
|  | 13 |  |  |  |  |  |  |  |  | 3.50 | 3.50 | 3.25 | 3.00 | 2.80 | 2.80 | 2.80 |  |
|  | 14 | " |  |  |  |  |  |  |  | 4.00 | 4.00 | 3.75 | 3.50 | 3.25 | 3.25 | 3.25 | 4.00 |

## *SERVICE CLAMPS OR SADDLES.

FOR MAKING SERVICE CONNECTIONS WITH RIVETED OR WELDED WROUGHT IRON PIPE.

$\dagger 2467$ - .
Single Strap.

$\dagger$ 2468.C.
Double Strap.

SINGLE STRAP-2467-C.
$\qquad$ Reexpecto Reexpedier Reexporto Refabrices Refachais Refagoter Refaisant Refaiseur Refaiuolo
Size, inches.
Each
Weight each, lbs.
...
$\$ 0.75$
$21 / 2$
.80

DOUBLE STRAP-2468-C.

| Code. | Refajo | Refalsado | Refashion | Refasten | Refauchait | Refauchons | Refazedor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................................. | 3 | $31 / 2$ | 4 | J | 6 | 7 | 8 |
| Each | \$1.50 | 1.60 | 1.60 | 1.75 | 1.90 | 2.20 | 2.60 |
| Weight each, lbs. | ........ | ...... | ...... | ...... | ...... | ...... |  |

We make Saddles for all sizes Sheet Iron, Wrought Iron or Cast Iron Pipe, and tap and thread for any size outlet.
*In ordering state what size and kind of pipe Saddle is to be used on, and give size of tapping.
†Carried in San Francisco only.

## CAST IRON RETURN BENDS.


$\dagger 2470$ - .
Return Bend-Close.

$\dagger 2471$ - C .
Return Bend-Open.

## RETURN BENDS-CLOSE-RIGHT HAND-2470-C.

| Code | Refegada | Refellebat | Refendais | Referat | Refercies | Refercimus | Referciunt | Referebat |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................... | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Center to Center, inches... | 11/4 | $11 / 2$ | 13/4 | 21/4 | $21 / 2$ | 31/4 | 33/4 | $41 / 2$ |
| Each | \$0.18 | . 20 | . 22 | . 28 | . 40 | . 57 | 1.20 | 1.70 |
| Weight each, lbs | . 4 | . 8 | 1.2 | 2 | 2.6 | 4.5 | ...... |  |

## RETURN BENDS-CLOSE-RIGHT AND LEFT HAND-2470-C.

| Code | ces | Referendar | Referiamos | Referible | Refermait | Refermasse | Refermiez | Refermions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Center to Center, inches | 11/4 | $11 / 2$ | 13/4 | 21/4 | $21 / 2$ | 31/4 | 33/4 | $41 / 2$ |
| Each................... | \$0.21 | . 23 | 26 | . 33 | . 46 | . 66 | 1.40 | 1.95 |

RETURN BENDS-OPEN-RIGHT HAND-247I-C.

| Code. | Referteira | Refertorum | Refertos | Refervebit | Referver | Refervida | Refestella |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 3/4 | 1 | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Center to Center, inches............ | 17/8 | $23 / 8$ | 3 | $31 / 2$ | $41 / 2$ | $51 / 2$ | $61 / 2$ |
| Each. | \$0.26 | . 30 | 40 | . 55 | . 80 | 1.35 | 2.20 |
| Weight each, lbs.. | 82 | 1.3 | 2.3 | 4 | 5.7 | ..... | ..... |
| RETURN BENDS-OPEN-RIGHT AND LEFT HAND-247I-C. |  |  |  |  |  |  |  |
| Code. | Refestin | no Refettorio | Reff kamn | Refibulabo | Refibules | Reficernt | Reficher |
| Size, inches. | 3/4 | 1 | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Center to Center, inches. | 17/8 | $23 / 8$ | 3 | $31 / 2$ | $41 / 2$ | $51 / 2$ | $61 / 2$ |
| Each... | \$0.30 | . 35 | . 46 | 64 | . 92 | 1.55 | 2.50 |

## CAST IRON ${ }_{2}$ COUPLINGS AND Y-BENDS.


$\dagger 2474-\mathrm{C}$.
Right and Left Coupling.

$\dagger 2475$ - 6.
Y Bend.

RIGHT AND LEFT COUPLINGS-2474-C.

| Code......... Size, inches | $\begin{gathered} \text { Reficia:m } \\ 1 \end{gathered}$ | $\begin{gathered} \text { Reficiebam } \\ 11 / 4 \end{gathered}$ | $\begin{gathered} \text { Reficienda } \\ 11 / 2 \end{gathered}$ | Refigebar 2 | Refigeris $21 / 2$ | $\begin{gathered} \text { Refigurado } \\ \mathbf{3} \end{gathered}$ | $\begin{aligned} & \text { Refigureis } \\ & 31 / 2 \end{aligned}$ | Refilhar $4$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.35 | . 40 | . 55 | . 65 | . 75 | 1.20 | 1.50 | 2.00 |

Y BENDS, STRAIGHT SIZES-2475-C.

| Code <br> Size, inches | Refilhos $1 / 2$ | Refilon 3/4 | Refinabais 1 | $\begin{aligned} & \text { Refinacion } \\ & 1 / 4 \end{aligned}$ | $\begin{aligned} & \text { Refinado } \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & \text { Refinadura } \\ & \quad 2 \end{aligned}$ | $\begin{gathered} \text { Refinareis } \\ 21 / 2 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.20 | 28 | . 34 | . 54 | . 66 | . 94 | 1.66 |
| Code <br> Size, inches | Refinaria 3 | $\begin{aligned} & \text { Refinaron } \\ & \mathbf{3} 1 / 2 \end{aligned}$ | $\begin{gathered} \text { Refind } \\ 4 \end{gathered}$ | Refinedly 5 | $\begin{aligned} & \text { Refinement } \\ & 6 \end{aligned}$ | $\begin{aligned} & \text { Refineries } \\ & 7 \end{aligned}$ | $\begin{aligned} & \text { Refinery } \\ & \mathbf{8} \end{aligned}$ |
| Each.. | \$2.50 | 3.50 | 4.00 | 7.00 | 9.20 | 15.60 | 22.50 |

Y BENDS, REDUCING SIZES-2475-C.

$\dagger$ Carried in San Francisco only.

## CAST IRON LONG RADIUS FITTINGS.



LONG RADIUS ELLS-2478-C.

| Code Size, inches | Reflagito $1$ | Reflairer $11 / 4$ | Reflambant $11 / 2$ | $\begin{gathered} \text { Reflammes } \\ 2 \end{gathered}$ | Reflamus $21 / 2$ | Reflaret 3 | Reflatter $31 / 2$ | $\begin{aligned} & \text { Reflaturam } \\ & \mathbf{4} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.32 | . 40 | . 55 | . 80 | 1.20 | 2.25 | 3.25 | 3.50 |
| Weight each, lbs... | ....... | ...... | ...... | 6.5 | 7.5 | 10.5 | 17 | 19.5 |
| Code $\qquad$ Size, inches. |  | $\begin{aligned} & \text { Reflaturos } \\ & 41 / 2 \end{aligned}$ | Reflaveris 5 | $\begin{aligned} & \text { Reflectado } \\ & \mathbf{6} \end{aligned}$ | Reflectais 7 | $\begin{aligned} & \text { Reflectir } \\ & 8 \end{aligned}$ | Reflejada 10 | Reflejando 12 |
| Each |  | \$5.50 | 6.50 | 8.75 | 13.00 | 17.00 | 30.00 | 40.00 |
| Weight each, lbs........... | ......... | 27 | 39.5 | 54.5 | ........ | 97 | 175 | ...... |

LONG RADIUS DOUBLE BRANCH ELLS-2479-C.

| Code $\qquad$ Size, inches | Reflejar $1$ | $\begin{aligned} & \text { Reflejo } \\ & \mathbf{1}^{1 / 4} \end{aligned}$ | - Reflessano$11 / 2$ |  | Reflessare$2$ |  | Reflet $21 / 2$ | Refletant 3 |  | Reflexao $31 / 2$ | Reflexe 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.64 | . 80 | 1.10 |  | 1.60 |  | 2.40 | 4.50 |  | 6.50 | 7.00 |
| Weight each, lbs.. | .... |  |  |  |  |  |  |  |  | ...... |  |
| Code Size | Reflexible $41 / 2$ |  | $\begin{aligned} & \text { Reflexif } \\ & \mathbf{5} \end{aligned}$ | Reflexiono <br> 6 |  | Reflexity |  | $\begin{aligned} & \text { Reflexivo } \\ & 8 \end{aligned}$ | Reflorebas <br> 10 |  | Refloreo 12 |
| Each | \$11.00 |  | 13.00 | 17.50 |  | 26.00 |  | 34.00 | 60.00 |  | 80.00 |
| Weight each, lbs. | ....... |  | ........ |  |  |  |  | $\ldots$ |  | ...... |  |

## LONG RADIUS TEES-2480-C.

| Code | Refloreret | Reflourish | Reflowers | Refluamen | Refluctuo | Refluebat | Refluement | Refluency |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1 | 11/4 | $11 / 2$ | 2 | $21 / 2$ | 3 | $31 / 2$ | 4 |
| Each. | \$0.48 | . 60 | . 82 | 1.20 | 1.80 | 3.40 | 4.90 | 5.25 |
| Weight each, lbs. .. |  | ...... | ...... | $\ldots$ | ...... | ...... | ...... | ...... |
| Code. Size, inches. |  | Refluente $41 / 2$ | $\begin{aligned} & \text { Refluida } \\ & \mathbf{5} \end{aligned}$ | $\begin{aligned} & \text { Refluimus } \\ & \mathbf{6} \end{aligned}$ | $\begin{gathered} \text { Refluirian } \\ \mathbf{7} \end{gathered}$ | $\begin{aligned} & \text { Reflunt } \\ & 8 \end{aligned}$ | Refluxeram 10 | Refodies 12 |
| Each. |  | \$8.25 | 9.75 | 13.25 | 19.50 | 25.50 | 45.00 | 60.00 |
| IVeight each, lbs. |  | .... | ....... | ....... | ....... | ....... | ....... |  |

$\dagger$ Carried in San Francisco only.

## $\dagger$ BRANCH TEES.



No. 1. For Circulation.


No. 2. For Circulation.


2485-C.
No. 3. For Box Coils.

All openings in Branch Tees for Circulation are tapped Right Hand.
Branch Tees for Box Coils are always tapped Left Hand in branches and Right Hand in Back Inlet.

|  | 1-Inch Branch Tees. |  |  | 11/4-Inch Branch Tees. |  |  | 11/2-Inch Branch Tees. |  |  | 2-Inch Branch Tees. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $21 / 2$ Inches Center to Center. |  |  | 3 Inches Center to Center. |  |  | $31 / 2$ Inches Center to Center. |  |  | 41/2 Inches Center to Center. |  |  |
|  | $\begin{aligned} & \text { 1-In. or } \\ & \text { 1 } 1 / 4-\operatorname{In} . \\ & \text { Run. } \end{aligned}$ | $\begin{gathered} 1 \frac{1}{1 / 2} \text { Run. } \\ \text { Run. } \end{gathered}$ | $\begin{aligned} & \text { 2-In. } \\ & \text { Run. } \end{aligned}$ | $\begin{gathered} 11 /-\mathrm{In} . \text { or } \\ 11 / 2-\mathrm{In} . \\ \text { Run. } \end{gathered}$ | $\begin{aligned} & \text { 2-In. } \\ & \text { Run. } \end{aligned}$ | $\begin{gathered} 2 \frac{1}{2} / \mathrm{In} . \\ \text { Run. } \end{gathered}$ | $\begin{gathered} 11 / 2-\text { In. or } \\ 2-\mathrm{In} . \\ \text { Run. } \end{gathered}$ | $\begin{gathered} 2 \frac{1}{2} / \mathrm{In} . \\ \text { Run. } \end{gathered}$ | $\begin{aligned} & \text { 3-In. } \\ & \text { Run. } \end{aligned}$ | $\begin{aligned} & \text { 2-In. } \\ & \text { Run. } \end{aligned}$ | $\begin{array}{\|c\|} \hline 21 / 2-\mathrm{In} . \text { or } \\ \text { 3-In. } \\ \text { Run. } \end{array}$ | $\begin{gathered} 31 / 2 \text {-In. } \\ \text { Run. } \end{gathered}$ |
| 2 | 90 | 1.00 | 1.15 |  |  |  |  |  |  |  |  |  |
| 3 | 1.05 | 1.15 | 1.35 | 1.65 | 1.90 | 2.40 | 2.70 | 3.45 | 3.80 | 5.25 | 5.75 | 6.25 |
| 4 | 1.15 | 1.30 | 1.60 | 2.00 | 2.40 | 2.85 | 3.35 | 4.15 | 4.60 | 6.40 | 7.00 | 7.75 |
| 5 | 1.35 | 1.45 | 1.85 | 2.40 | 2.90 | 3.55 | 4.00 | 5.00 | 5.50 | 7.65 | 8.50 | 9.25 |
| 6 | 1.60 | 1.75 | 2.10 | 2.80 | 3.30 | 3.95 | 4.65 | 5.75 | 6.25 | 8.80 | 9.75 | 10.75 |
| 7 | 1.90 | 2.20 | 2.45 | 3.20 | 3.90 | 4.20 | 5.25 | 6.50 | 7.25 | 10.60 | 11.75 | 13.00 |
| 8 | 2.20 | 2.45 | 2.75 | 3.60 | 4.50 | 4.95 | 5.85 | 7.00 | 7.75 | 11.50 | 12.75 | 14.00 |
| 9 | 2.65 | 2.90 | 3.40 | 4.30 | 5.25 | 6.15 | 6.50 | 8.25 | 9.00 | 12.25 | 13.50 | 15.00 |
| 10 |  | 3.30 | 4.00 | 4.80 | 5.85 | 6.85 | 7.60 | 9.25 | 10.00 | 13.50 | 15.00 | 16.50 |
| 11 |  | 4.50 | 4.80 | 5.00 | 6.25 | 7.25 | 8.00 | 9.75 | 10.75 | 14.25 | 15.75 | 18.00 |
| 12 |  | 4.75 | 5.10 | 5.25 | 6.50 | 7.65 | 8.50 | 10.50 | 11.50 | 15.00 | 16.50 | 20.00 |
| 13 |  | 5.50 | 6.00 | 6.00 | 7.00 | 8.25 |  |  |  |  |  |  |
| 14 |  | 7.00 | 7.25 | 6.75 | 7.75 | 9.00 |  |  |  |  |  |  |
| 15 |  | 7.50 | 7.75 | 7.50 | 8.50 | 9.75 |  |  |  |  |  |  |
| 16 |  | 8.00 | 8.25 | 8.50 | 9.50 | 10.75 |  |  |  |  |  |  |



Always order Branch Tees by size and number.
$\dagger$ Carried in San Francisco only.

## CAST IRON HOOKS AND HOOK PLATES.



Expansion Pipe Hangers or Ring Hooks.

$\dagger$ 2489-C.
Single Hooks.

$\dagger 2490-\mathrm{C}$.
Hook Plates.

| Code Size, inches.. | Refogado 1/2 | Refolding 3/4 | Refolhado 1 | Refolho $11 / 4$ | $\begin{aligned} & \text { Refoment } \\ & \mathbf{1} 1 / 2 \end{aligned}$ | $\begin{gathered} \text { Refoncage } \\ \mathbf{2} \end{gathered}$ | $\begin{gathered} \text { Refondait } \\ \mathbf{2} 1 / 2 \end{gathered}$ | Refondiez $3$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.17 | . 17 | . 18 | . 19 | . 25 | . 29 | . 36 | 44 |
| Weight each, lbs... |  | . 6 | . 8 | 1.2 | 1.5 | 1.7 | 1.7 | 2.5 |
| Code Size, inches. |  | Refont $31 / 2$ | $\begin{aligned} & \text { Reforant } \\ & \underset{4}{ } \end{aligned}$ | $\begin{gathered} \text { Reforcado } \\ \mathbf{4} 1 / 2 \end{gathered}$ | $\begin{gathered} \text { Reforgeras } \\ \mathbf{5} \end{gathered}$ | $\begin{aligned} & \text { Reforging } \\ & 6 \end{aligned}$ | $\begin{gathered} \text { Reforma } \\ 7 \end{gathered}$ | $\begin{aligned} & \text { Reformable } \\ & 8 \end{aligned}$ |
| Each |  | \$0.55 | . 63 | . 90 | 1.12 | 1.35 | 1.80 | 2.25 |
| Weight each, lbs.. |  | 2.5 | 3.7 | 4 | 7.5 | ........ | ....... |  |

PARTS OF EXPANSION PIPE HANGERS.

| Size, in | 1/2 | 3/4 | 1 | $11 / 4$ | 11/2 | 2 | $21 / 2$ | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plates, each | \$0.08 | . 08 | . 08 | . 08 | . 09 | 09 | . 10 | 10 |
| Buttons, each. | . 06 | . 06 | . 06 | . 06 | . 07 | 07 | . 08 | . 08 |
| Rings, each. | . 08 | . 08 | . 12 | . 15 | 20 | 25 | . 30 | 40 |
| Size, inches |  | $31 / 2$ | 4 | $41 / 2$ | 5 | 6 | 7 | 8 |
| Plates, each |  | \$0.10 | . 10 | . 10 | . 10 | . 10 | . 10 | . 10 |
| Buttons, each. |  | . 08 | . 08 | . 08 | . 08 | . 08 | . 08 | . 08 |
| Rings, each. |  | . 50 | . 60 | . 85 | 1.00 | 1.25 | 1.70 | 2.15 |

Buttons and Rings for $1 / 2$-inch to 2 -inch, inclusive, are tapped for $3 / 8$-inch pipe, larger sizes for 1/2-inch pipe.

## HOOK PLATES—2489-C AND 2490-C.

| Number of | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For 1-inch Pipe .. | \$0.09 | . 18 | . 23 | . 26 | . 32 | . 38 | . 48 | . 59 | . 65 | 70 | 85 | 1.00 |
| For $11 / 4$-inch Pipe | . 10 | . 21 | . 27 | . 32 | . 41 | . 52 | . 68 | 80 | . 90 | 1.20 | 1.35 | 1.40 |
| For $11 / 2$-inch Pipe | 15 | . 28 | . 43 | . 58 | . 72 | . 88 | 1.10 | 1.25 | 1.40 | 1.55 | 1.65 | 1.90 |
| For 2 -inch Pipe.. | . 22 | . 43 | . 65 | . 90 | 1.15 | 1.35 |  |  |  |  |  |  |

$\dagger$ Carried in San Francisco only.

## CEILING AND FLOOR PLATES.



2493-C.
Ceiling Plates in Halves.

†2494-C.
Ceiling Plates in One Piece.

$\dagger 2495-\mathrm{C}$.
Floor Plates.

## CAST IRON CEILING PLATES IN HALVES-2493-C.

| Code | Reformaras | Reformarem | eformav | Reformis | eformly | formon | eformwerk | Refortify | $\stackrel{\text { Reforzabas }}{4}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches...... | 3/4 | 1 | 11/4 | 11/2 | - | $21 / 2$ | 3 | $31 / 2$ |  |
| Each. | \$0.22 | . 28 | . 32 | . 40 | . 50 | . 65 | . 90 | 1.00 | 1.20 |
| Weight each, lbs | . 4 | . 8 | 1.5 | 1.7 | 2 | 2.2 | 2.6 |  |  |

## CAST IRON CEILING PLATES IN ONE PIECE-2494-C.



## CAST IRON FLOOR PLATES WITH COLLAR-2495-C.

| Code Size, inches. | Refoulasse $1 / 2$ | Refouleur $3 / 4$ | Refounder 1 | Refourrant $11 / 4$ | Refoveas $11 / 2$ | $\begin{aligned} & \text { Reforebant } \\ & 2 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.06 | . 06 | . 08 | . 11 | . 14 | . 16 |
| Weight each, lbs. | $\ldots$ | 2 | . 3 | . 4 | 5 | 6 |
| Code |  |  | Refovero | Refracted | Refragable | Refragamur |
| Size, inches. |  |  | $21 / 2$ | 3 | $31 / 2$ | 4 |
| Each |  |  | \$0.24 | . 30 | . 35 | 42 |
| Weight each, lbs. |  |  | . 7 | . 8 | $\ldots$ | ... |

This Floor Plate is made with grooves on the under side of the flange, as shown in cut, in order that it may be easily parted by a slight blow when required to be used in halves.
$\dagger$ Carried in San Francisco only.

## †CAST IRON DRAINAGE FITTINGS.

SCREWED FOR IRON PIPE.

The necessity for better and safer House Drainage has induced Sanitary Engineers to recommend and adopt Wrought Iron Screwed-Jointed Pipes in place of the ordinary Cast-Iron Head-Jointed Soil Pipes, preventing thereby accumulation of Sewer Gas in houses, caused by leaky lead joints.

The following fittings are specially adapted to the Durham System of House Drainage.
These fittings have an interior shoulder, and are made with same inside capacity as the inside diameter of the Pipe, thus securing an unobstructed interior surface, allowing all solid matters to pass without choking up the pipes.

2500.C.

Long Turn Elbow.


2501-C.
Short Turn Elbow.


2502-C.
$45^{\circ}$ Long Turn Elbow.


2503-C.
LONG TURN ELBOWS-2500-C.

| Code | Refragando | Refragate | Refragia | Refrained | Refranchir | Refranes | Refranger | Refrangiez |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 1 | 11/4 | $11 / 2$ | 2 | 3 | 4 | 5 | 6 |
| Each......................... | \$0.45 | . 50 | . 60 | . 70 | 1.30 | 2.00 | 3.60 | 5.20 |

SHORT TURN ELBOWS-250I-C.

| Code | Refransear | Refrappage | Refrappais | Refrappons | Refrescar | Refresco |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $11 / 2$ | 2 | 3 | 4 | 5 | 6 |
| Each. | \$0.50 | . 60 | 1.10 | 1.70 | 2.60 | 3.50 |

45 ${ }^{\circ}$ LONG TURN ELBOWS-2502-C.

| Code $\qquad$ Size, inches | $\begin{gathered} \text { Refresh } \\ \mathbf{3} \end{gathered}$ | $\underset{\mathbf{4}}{\text { Refreshing }}$ | $\stackrel{\text { Refresques }}{\mathbf{5}}$ | $\underset{6}{\text { Refricabis }}$ |
| :---: | :---: | :---: | :---: | :---: |
| Each. | \$1.45 | 2.25 | 4.00 | 5.75 |

45 ${ }^{\circ}$ SHORT TURN ELBOWS-2503-C.

| Code $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | Refricamus | Refricaret | Refrices | Refriego | Refrieguen | Refrigerar | Refringent |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches....................... | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | $\$ 0.40$ | .50 | .60 | 1.10 | 1.70 | 2.60 | 3.50 |

Sizes differing from above can be furnished, but will be charged extra.
Galvanized Drainage Fittings double above list.
Prices for Brass Drainage fittings furnished on application.
†Carried in San Francisco only.

## †CAST IRON DRAINAGE FITTINGS.

## SCREWED FOR IRON PIPE



2506-C. $60^{\circ}$ Elbow.

$2507 . \mathrm{C}$.
$221 / 2^{\circ}$ Elbow.

2508.C. $11 \frac{1}{4^{\circ}}$ Elbow.


2509-C. $55 / 8^{\circ}$ Elbow.

60́․ ELBOWS-2506-C.

| Cod | Refringida | Refrinja | Refrisait | Refrisons | Refrita | Refritos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches... | $11 / 2$ | 2 | 3 | 4 | 5 | 6 |
| Ea | \$0.50 | 60 | 1.10 | 1.70 | 2.60 | 3.5 |

$221 / 2^{\circ}$ ELBOWS-2507-C.


I $11 / 4^{\circ}$ ELBOWS-2508-C.

| Co | Refudisset | Refudit | Refuerzan | Refugabor | Refugadora | Refugarum |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $11 / 2$ | 2 | 3 | 4 | 5 | 6 |
| Each | \$0.50 | 60 | 1.10 | 1.70 | 2.60 | 3.50 |

55/8 ${ }^{\circ}$ ELBOWS—2509-C.

| Code. | Refugerunt | Refugiada | Refugiar | Refugiebat | Refugio | Refugiorum |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | $11 / 2$ | 2 | 3 | 4 | 5 | 6 |
| Each... | \$0.50 | 60 | 1.10 | 1.70 | 2.60 | 3.50 |



2512-C.
Plain Tee.


2513-C. Increaser.

PLAIN TEES-2512-C.

| Code | Refugisces |
| :---: | :---: |
| Size. inches | $11 / 2$ |
| Each. | \$0.75 |
| Code. <br> Size, inches. <br> Each. |  |
|  |  |
|  |  |


| Refugisset | Refugor | Refulgebat | Refulgemus | Refulgency | Refulsimus |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | $\mathbf{2 x} \mathbf{1} 1 / 2$ | $\mathbf{3}$ | $\mathbf{3 x} \mathbf{2}$ | $\mathbf{4}$ | $\mathbf{4 x 2}$ |
| .90 | .90 | 1.40 | 1.40 | 2.30 | 2.30 |
| Refundar | Refundebam | Refundiera | Refundio | Refundiras | Refunfuno |
| $\mathbf{4 x 3}$ | $\mathbf{5}$ | $\mathbf{0 x 2}$ | $\mathbf{0 x 3}$ | $\mathbf{6}$ | $\mathbf{6 x 4}$ |
| $\$ 2.30$ | 4.00 | 4.00 | 4.00 | 6.00 | 6.00 |

INCREASERS-25I3-C.

| Code................. | Refurbish | Refusador | Refusais | Refuse | Refuseront | Refuseur | Refusons | Refusorios |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Size, inches......... | $\mathbf{3 x 2}$ | $\mathbf{4 x 2}$ | $\mathbf{4 x}$ | $\mathbf{5 x 2}$ | $\mathbf{5 x 3}$ | $\mathbf{5 x 4}$ | $\mathbf{6 x 4}$ | $\mathbf{6 x 5}$ |
| Each............... | $\$ 1.00$ | 1.50 | 1.50 | 2.00 | 2.00 | $\mathbf{2} .00$ | 3.00 | $\mathbf{2 . 0}$ |

Sizes differing from above can be furnished, but will be charged extra.
Galvanized Drainage Fittings double above list.
Prices for Brass Drainage Fittings furnished on application.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## †CAST IRON DRAINAGE FITTINGS.

SCREWED FOR IRON PIPE.

$45^{\circ} \mathrm{Y}$ BRANCHES-2516-C AND 2517-C.

| Code. $\qquad$ Size, inches | Refutaba $11 / 2$ | $\begin{aligned} & \text { Refutacao } \\ & \mathbf{2} \end{aligned}$ | Refutandos $2 \times 11 / 2$ | Refutarais <br> 3 | Refutatif 3x2 | Refutatosy $4$ | Refutatura $4 \times 2$ | $\begin{aligned} & \text { Refutave } \\ & \mathbf{4 \times 3} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.80 | 1.00 | 1.00 | 1.70 | 1.70 | 2.60 | 2.60 | 2.60 |
| Code $\qquad$ Size, inches. $\qquad$ | Refuterait 5 | Refutions $5 \times 2$ | $\begin{aligned} & \text { Refuto } \\ & \text { 5x3 } \end{aligned}$ | Regabofe $5 \times 4$ | $\underset{\mathbf{6}}{\text { Regadeira }}$ | Regadia $6 \times 2$ | Regagnait 6x4 | $\begin{gathered} \text { Regagniez } \\ \mathbf{6 x 5} \end{gathered}$ |
| Each............. | \$3.50 | 3.50 | 3.50 | 3.50 | 5.50 | 5.50 | 5.50 | 5.50 |

$45^{\circ}$ DOUBLE Y BRANCHES-2518-C.

$60^{\circ}$ Y BRANCHES-2519-C.

| Code $\qquad$ Size, inches |  | $\begin{gathered} \text { Regalillos } \\ \mathbf{2 \times 1} 1 / 2 \end{gathered}$ | $\begin{array}{r} \text { Regali } \\ \mathbf{3 x} \end{array}$ | alioos | $\begin{aligned} & \text { Regalis } \\ & \mathbf{4 x} \mathbf{2} \end{aligned}$ |  | $\begin{aligned} & \text { Regalito } \\ & \mathbf{4 \times 3} \end{aligned}$ | $\begin{aligned} & \text { Regalo } \\ & \mathbf{5 x 2} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each |  | \$1.00 |  | 70 | 2.60 |  | 2.60 | 4.50 |
| Code $\qquad$ Size, inches | $\begin{aligned} & \text { Regalolla } \\ & \text { Ex3 } \\ & \text { 5x } \end{aligned}$ |  | Regalona 5x4 | $\begin{aligned} & \text { Regammans } \\ & \quad \mathbf{6 x 2} \end{aligned}$ |  | $\begin{aligned} & \text { Reganarais } \\ & \mathbf{6 \times 4} \end{aligned}$ |  | $\begin{aligned} & \text { Regauaran } \\ & \mathbf{6 x ⿹} \end{aligned}$ |
| Each | \$4. |  |  |  | 00 |  | . 00 | 7.00 |

Sizes differing from above can be furnished, but will be charged extra.
Galvanized Drainage Fittings double above list.
Prices for Brass Drainage Fittings furnished on application.
$\dagger$ Carried in San Francisco only.

## †CAST-IRON DRAINAGE FITTINGS.



CLOSET TEES.

| Size, in | 3 | 4 | 5 x 4 | $6 \times 4$ |
| :---: | :---: | :---: | :---: | :---: |
| Code...... | Reganona | Regardable | Regardar | Regardems |
| With 2-inch inlet right side only..................................... | \$3.00 | 3.50 | 6.50 | 8.00 |
| Code. | Regardful | Regardons | Regarniras | Regataria |
| With 2-inch inlet left side only | \$3.00 | 3.50 | 6.50 | 8.00 |
| Code. | Regatear | Regather | Regatinho | Regatoa |
| With 2-inch inlet both sides, 2522-C. | \$3.50 | 4.00 | 7.00 | 10.00 |
| Code | $\because \cdot$ | Regatonear | Regatoneo | Regayant |
| With 2-inch inlet right side and top. |  | \$5.50 | 7.00 | 9.00 |
| Code |  | Regazamos | Regazen | Regazonne |
| With 2-inch inlet left side and top. |  | \$5.50 | 7.00 | 9.00 |
| Code. |  | Regebaris | Regedora | Regelation |
| With 2-inch inlet both sides and top, 2523-C ....... | ......... | \$6.00 | 7.50 | 10.00 |

Sizes differing from above can be furnished but will be charged extra.
Galvanized Drainage Fittings double above list.
Prices for Brass Drainage Fittings furnished on application.
+Carried in San Francisco only.

## †CAST IRON DRAINAGE FITTINGS.

## SCREWED FOR IRON PIPE.


2526.C.

## Y BRANCHES-TEE PATTERN.




Three-Way Elbow.

2528.C.

Cross.

THREE-WAY ELBOWS-2527-C.


Sizes differing from above can be furnished, but will be charged extra.
Galvanized Drainage Fittings Double above List.
Prices for Brass Drainage Fittings furnished on application.
$\dagger$ Carried in San Francisco only.

## $\dagger$ CAST IRON DRAINAGE FITTINGS.

SCREWED FOR IRON PIPE.

HALF "S" OR "P" TRAPS-2530-C.

Code
Size, inches. $\qquad$ Regenpomp Regenrinne

| $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\$ 2.25$ | 3.00 | 4.50 | 7.50 | 14.00 |

"S" TRAPS—253I-C.


2532.C.

Running Traps.
Code


Galvanized Drainage Fittings, double above list.
Prices for Brass Drainage Fittings furnished on application.
$\dagger$ Carried in San Francisco only.

## CAST SOIL PIPE, SINGLE HUB.

LENGTH, 5 FEET. TAR COATED.



2550-C.

STANDARD.


## †EXTRA HEAVY.

| Code $\qquad$ Size, inches. | $\begin{gathered} \text { Reggetone } \\ \mathbf{2} \end{gathered}$ | $\begin{gathered} \text { Reggeva } \\ \mathbf{3} \end{gathered}$ | $\underset{4}{\text { Reggiamo }}$ | $\begin{aligned} & \text { Reggimento } \\ & 5 \end{aligned}$ | $\begin{aligned} & \text { Reggitivo } \\ & \mathbf{6} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Per foot. | \$0.35 | . 65 | . 80 | 1.15 | 1.30 |
| Weight per length, lbs. Shipping measure, per length, cubic feet | $\begin{gathered} 27^{1 / 2} \\ 1 / 3 \end{gathered}$ | $471 / 2$ | $\begin{gathered} 65 \\ \times 1 / 12 \end{gathered}$ | $\begin{gathered} 85 \\ 15 / x_{2} \end{gathered}$ | $\begin{gathered} 100 \\ 11 / 12 \end{gathered}$ |

## CAST SOIL PIPE, DOUBLE HUB.

LENGTH, 5 FEET. TAR COATED.


2551-C.

STANDARD.

†EXTRA HEAVY.

| Code Size, inches | $\begin{aligned} & \text { Regicidio } \\ & \mathbf{2} \end{aligned}$ | $\begin{gathered} \text { Regicismo } \\ \mathbf{3} \end{gathered}$ | $\begin{gathered} \text { Regidora } \\ 4 \end{gathered}$ | $\begin{aligned} & \text { Regiduria } \\ & 5 \end{aligned}$ | $\begin{aligned} & \text { Regiensis } \\ & \mathbf{6} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Per length. | \$2.05 | 3.55 | 4.30 | 6.25 | 7.25 |
| Weight per length, lbs. Shipping measure, per length, cubic feet | $\begin{gathered} 271 / 2 \\ 1 / 2 \end{gathered}$ | $\begin{gathered} 471 / 2 \\ 2 / 3 \end{gathered}$ | $\begin{gathered} 65 \\ 1 \end{gathered}$ | $\begin{gathered} 85 \\ 11 / 2 \end{gathered}$ | $\begin{gathered} 100 \\ 2 \end{gathered}$ |

We call your special attention, and we consider it of the utmost importance from a sanitary point of view, that Our Soil Pipe is of superior quality, thoroughly sound, uniform in thickness, smooth surface inside and outside, and can be cut without splitting.
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.

## QUARTER BENDS.



## QUARTER BENDS.

WITH 2-INCH HEEL CONNECTION. STANDARD.


## QUARTER BENDS.

WITH 2-INCH SIDE CONNECTION.
Connection can be Furnished on either Right or Left Side.


2557-C.
Cut Shows Right Side
Connection.
$\dagger$ Carried in San Francisco only.

## QUARTER BENDS.

WITH DOUBLE HUBS. STANDARD.


2560-c.

| Code. Size, inches | $\underset{2}{\text { Regimber }}$ | $\begin{gathered} \text { Regimbiez } \\ \dagger \mathbf{3} \end{gathered}$ | $\underset{4}{\text { Regimbons }}$ | $\begin{gathered} \text { Regıminal } \\ \dagger 5 \end{gathered}$ | $\underset{+6}{\text { Regiminum }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.70 | . 95 | 1.10 | 2.00 | 2.50 |
| Weight each, lbs....... | 5 | $61 / 2$ | 9 | 12 | $161 / 2$ |
| $\dagger$ EXTRA HEAVY. |  |  |  |  |  |
| Code Size, inches. | $\underset{\mathbf{2}}{\text { Regimonia }}$ | $\begin{aligned} & \text { Regimur } \\ & \mathbf{3} \end{aligned}$ | Reginarum <br> 4 | $\begin{aligned} & \text { Reginbert } \\ & 5 \end{aligned}$ | Regınlinde <br> 6 |
| Each | \$0.80 | 1.25 | 1.45 | 2.50 | 3.25 |
| Weight each, lbs....... | $81 / 2$ | $121 / 2$ | 16 | 22 | 34 |

LONG QUARTER BENDS.


2561-C.

STANDARD.


## FIFTH BENDS.

STANDARD.

$\dagger 2562$ - C .

| Code. Size, inches | $\begin{gathered} \text { Regirar } \\ 2 \end{gathered}$ | Regisella <br> 3 | Regissais $4$ | Regisses 5 | $\begin{gathered} \text { Register } \\ 6 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.40 | . 65 | . 80 | 1.50 | 2.00 |
| Weight each, lbs.. | 3 | 43/4 | 6 | 8 | 11 |

## $\dagger$ EXTRA HEAVY.

Code............................
Registrano Registrava Registries Registros Regitiva
Size, inches.
$\begin{array}{llll}\mathbf{2} & \mathbf{3} & \mathbf{4}\end{array}$
4
Each ..............................
Weight each, lbs.
$\$ 0.50 \quad .95$
$1.15 \quad 2.00$

6
$43 / 4$
$61 / 4$
$91 / 2$
12
2.75
$\dagger$ Carried in San Francisco only.
In Orders and Specifications give Plate Numbers and Sizes.
SIXTH BENDS.

| Code | Reglaban | Reglage | Reglant | Reglaremos | Reglaste |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches....................... | 2 | 3 | 4 | 5 | 6 |
| Each. | \$0.40 | . 65 | . 80 | 1.50 | 2.00 |
| Weight each, lbs.. | 3 | 43/4 | 6 | 8 | 11 |
|  | $\dagger$ EXTRA | HEAVY. |  |  |  |
| Code. $\qquad$ <br> Size, inches $\qquad$ | $\begin{aligned} & \text { Reglerons } \\ & 2 \end{aligned}$ | $\begin{aligned} & \text { Regles } \\ & \mathbf{3} \end{aligned}$ | $\begin{aligned} & \text { Reglescit } \\ & 4 \end{aligned}$ | $\begin{gathered} \text { Reglissant } \\ 5 \end{gathered}$ | $\begin{aligned} & \text { Reglisse } \\ & \mathbf{6} \end{aligned}$ |
| Each. | \$0.50 | . 95 | 1.15 | 2.00 | 2.75 |
| Weight each, lbs.. | 43/4 | 61/4 | $91 / 2$ | 12 | 16 |


$\dagger \mathbf{2 5 6 6 - C}$.


2567-C.

## EIGHTH BENDS.

| Code. | Regnabamus | Regnabunt | Regnait | Regnamento | - Regnancy |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches................. | 2 | 3 | 4 | 5 | $\dagger 6$ |
| Each. | \$0.40 | . 65 | . 80 | 1.50 | 2.00 |
| Weight each, lbs......... | 3 | 43/4 | 6 | 8 | 11 |
| $\dagger E X T R A$ HEAVY. |  |  |  |  |  |
| Code... | Regnaretis | Regnativo | Regnator | Regnatrix | Regnaturam |
| Size, inches. | 2 | 3 | 4 | 5 | 6 |
| Each. | \$0.50 | . 95 | 1.15 | 2.00 | 2.75 |
| Weight each, lbs... | $41 / 4$ | 61/4 | $91 / 2$ | 12 | 16 |


$\dagger$ †568-C.

## EICHTH BENDS.

## WITH DOUBLE HUBS.

## STANDARD.


$\dagger$ Carried in San Francisco only.

## SIXTEENTH BENDS.



STANDARD.


| Regneront | Regnicides | Regnicola | Regnosaure | Regoado |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | $\boldsymbol{\dagger}$ | $\mathbf{4}$ | $\boldsymbol{\dagger}$ | $\boldsymbol{+ 6}$ |
| $\$ 0.40$ | .65 | .80 | 1.50 | 2.00 |
| $23 / 4$ | $41 / 2$ | $51 / 2$ | $71 / 2$ | $101 / 2$ |

$\dagger$ EXTRA HEAVY.

| Code. | Regoadura | Regodeado | Regodeamus | Regodearse | Regolame |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.................... | 2 | 3 | 4 | 5 | 6 |
| Each. | \$0.50 | . 95 | 1.15 | 2.00 | 2.75 |
| Weight each, lbs ............ | 4 | 6 | 9 | 11 | 15 |


$\dagger 2572 . \mathrm{C}$.
Code
Regolasse
Size, inches. $\dagger 4$
Each \$1.10
Weight each, lbs.

## "T" BRANCHES.

STANDARD.

| Code <br> Size, inches | Regolativo $2 \times 2$ | Regolatore $\dagger 3 \times 2$ | Regolavano $\dagger 3 x 3$ | $\begin{aligned} & \text { Regolfaban } \\ & \mathbf{4 x} \mathbf{2} \end{aligned}$ | Regolfado $4 \times 3$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each . | \$0.60 | . 90 | 1.00 | 1.20 | 1.30 |
| Weight each, lbs............. | 4 | 8 | 8 | 10 | 10 |



Code........ ............ .......

| $\begin{aligned} & \text { Regolfaria } \\ & \mathbf{4 \times 4} \end{aligned}$ | $\begin{aligned} & \text { Regolfbant } \\ & \boldsymbol{\dagger 5 \times 2} \end{aligned}$ | Regolfes $\dagger 5 \times 3$ | Regomargem $\dagger 5 \times 4$ | Regonfle $\dagger 5 \times 5$ |
| :---: | :---: | :---: | :---: | :---: |
| \$1.40 | 1.70 | 1.80 | 1.90 | 2.00 |
| 10 | 14 | 15 | 15 | 15 |

Weight each, lbs. $\qquad$ $10 \quad 1$
$15 \quad 15$
15

| Code.. | Regor | Regordeta | Regordida | Regorge | Regorgeant |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches. | +6x2 | $\dagger 6 \mathrm{x} 3$ | +6x4 | +6x5 | +6x6 |
| Each | \$2.50 | 2.60 | 2.70 | 2.80 | 2.90 |
| Weight each, lbs. | 18 | 19 | 19 | 20 | 20 |


| Code $\qquad$ Size, inches.. | $\begin{gathered} \text { Regorjaba } \\ \mathbf{2 x} \mathbf{2} \mathbf{2} \end{gathered}$ | $\begin{aligned} & \text { Regorjamos } \\ & \mathbf{3 x 3} \end{aligned}$ | Regorjar $4 \times 4$ | Regostabas $5 \times 5$ | Regostais $6 \times 4$ | Regostando $6 \times 6$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.80 | 1.40 | 1.80 | 2.90 | 3.70 | 3.90 |
| Weight each, lbs............................. | 7 | 13 | 20 | 25 | 33 | 34 |

$\dagger$ Carried in San Francisco only.

## CAST IRON SOIL PIPE FITTINGS.

P 633

2576.C.
"T" BRANCHES.
TAPPED FOR IRON PIPE. STANDARD.

| Code | Regostar | Regougar | Regougo |
| :---: | :---: | :---: | :---: |
| Size, inches | +2x1 | 2x11/4 | Qx11/2 |
| Each. | \$1.35 | 1.35 | 1.35 |
| Weight each, lbs. | ...... | ...... | +1/2 |
| Code $\qquad$ Size, inches. | $\begin{aligned} & \text { Regoule } \\ & \mathbf{2 x} \mathbf{2} \end{aligned}$ | Regourmer $4 \times 11 / 2$ | $\begin{aligned} & \text { Regraciar } \\ & \mathbf{4 \times 2} \end{aligned}$ |
| Each. | \$1.35 | 1.95 | 1.95 |
| Weight each, lbs. | 5 | 9 | 93/4 |

##  <br> $\dagger 2577$ -.


2578.C.

## †DOUBLE "T" BRANCHES.

TAPPED FOR IRON PIPE. STANDARD.


## SANITARY "T" BRANCHES.

TAPPED FOR IRON PIPE. STANDARD.

| Code $\ldots \ldots \ldots \ldots \ldots .$. | Regradabit | Regradabor | Regradamus | Regradaret |
| :--- | :---: | :---: | :---: | :---: |
| Size, inches......... | $\mathbf{2 x 1} 1 / 2$ | $\dagger \mathbf{2 x} \mathbf{2}$ | $\mathbf{4 x 1} 1 / 2$ | $\dagger \mathbf{4 x} \mathbf{2}$ |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots$ | $\$ 1.35$ | 1.35 | 1.95 | 1.95 |
| Weight ${ }^{\text {each, lbs.... }}$ | 5 | 6 | 10 | 11 |

W'eight each, lbs
$\dagger$ Carried in San Francisco only.
$\dagger 2579$ C.


## SANITARY "T" BRANCHES.


$2584 \cdot \mathrm{C}$.

| Code | Regrattage | Regraxar | Regredior | Regreffiez | Regreler |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | $2 \times 2$ | $3 \times 2$ | $3 \times 3$ | $4 \times 2$ | $4 \times 3$ |
| Each ......... | \$0.60 | 1.00 | 1.10 | 1.30 | 1.40 |
| Weight each, lbs.. | 5 | 8 | 9 | 12 | 13 |
| Code. | Regresados | Regresan | Regresaste | Regresemos | Regressar |
| Size, inches | 4x4 | $5 \times 2$ | $\dagger 5 \times 3$ | $5 \times 4$ | $5 \times 5$ |
| Each. | \$1.50 | 1.80 | 1.90 | 2.00 | 2.10 |
| Weight each, lbs | 13 | 17 | 17 | 18 | 18 |
| Code | Regression | Regressive | Regressos | Regretful | Regretter |
| Size, inches. | $6 \times 2$ | $\dagger 6 \times 3$ | $6 \times 4$ | +6x5 | $6 \times 6$ |
| Each | \$2.60 | 2.70 | 2.80 | 2.90 | 3.00 |
| Weight each, lbs. | 24 | 24 | 24 | 25 | 25 |

EXTRA HEAVY.

| Code | Regriffer | Regillant | Regrimpais | Regrimper | Regronder |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, in | $2 \times 2$ | $3 \times 2$ | 3x 3 | $4 \times 2$ | $4 \times 3$ |
| Each... | \$0.90 | 1.40 | 1.50 | 1.70 | 1.80 |
| Weight each, lbs. | 10 | 14 | 15 | 23 | 25 |
| Code | Regrowth | Regruniais | Regrunidos | Regrunimos | Regruniria |
| Size, inches | $4 \times 4$ | $5 \times 2$ | $5 \times 3$ | $5 \times 4$ | $5 \times 5$ |
| Each-....... | \$1.90 | 2.70 | 2.80 | 2.90 | 3.00 |
| Weight each, lbs | 25 | 30 | 30 | 32 | 32 |
| Code. | Regsam | Regsamkeit | Regsamsten | Reguacho | Reguadeiro |
| Size, inches | $6 \times 2$ | $6 \times 3$ | $6 \times 4$ | $6 \times 5$ |  |
| Each ........ | \$3.60 | 3.70 | 3.80 | 3.90 | 4.00 |
| IVeight each, lbs | 42 | 43 | 43 | 45 | ¢ |

$\dagger$ Carried in San Francisco only.


## UPRIGHT "Y" BRANCHES.

OR COMBINATION "Y" AND EIGHTH BEND. STANDARD

Code. RehminderSize, inches$4 \times 4$
Each ..... $\$ 2.25$Weight each, lbs.-

## †SANITARY "T" BRANCHES.

WITH $2-I N C H$ SIDE CONNECTION.
Connection can be Furnished on either Right or Left Side.
STANDARD.

| Code. | Reguante | Regueifa | - |
| :---: | :---: | :---: | :---: |
| Size, inches.............. | 3x3 Right Side | $4 \times 2$ Right Side | 4xt Right Side |
| Each | \$2.10 | 2.30 | 2.50 |
| Weight each, ${ }_{1} 1$ bs....... | 10 | 13 | 14 |
| Code. | Regueras | Reguerdon | Regulable |
| Size, inches.............. | 3x3 Left Side | $4 \times 2$ Left Side | 4x4 Left Side |
| Each | \$2.10 | 2.30 | 2.50 |
| Weight each, lbs...... | 10 | 13 | 14 |




## HORIZONTAL "T-Y" BRANCHES.

STANDARD.
Code. ..... Rehob
Size, inches ..... $4 \times 4$
Each ..... $\$ 2.50$Weight each, lbs.
$\qquad$

## "Y" BRANCHES.



2592-C.

STANDARD.

| Code Size, inches. | Rehoboam $\mathbf{2 x} 2$ | Rehoboth $3 \times 2$ | $\begin{gathered} \text { Rehogaban } \\ \mathbf{3 x} \mathbf{3} \end{gathered}$ | $\begin{gathered} \text { Rehogadas } \\ \mathbf{4 \times 2} \end{gathered}$ | $\begin{aligned} & \text { Rehogamos } \\ & \mathbf{4 x} \mathbf{x} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.60 | 1.00 | 1.10 | 1.30 | 1.40 |
| Weight each, lbs... | 5 | 8 | 9 | 12 | 13 |
| Code Size, inches. | Rehogaste $4 \times 4$ | Rehogo $5 \times 2$ | Rehogue $5 \times 3$ | $\begin{aligned} & \text { Rehollamos } \\ & \mathbf{5 x t} \end{aligned}$ | Rehollar $5 \times 5$ |
| Each. | \$1.50 | 1.80 | 1.90 | 2.00 | 2.10 |
| Weight each, lbs | 13 | 17 | 17 | 18 | 18 |
| Code $\qquad$ Size, inches. $\qquad$ | $\begin{aligned} & \text { Rehoyar } \\ & \mathbf{6 x 2} \end{aligned}$ | Rehpsosten $\dagger 6 \times 3$ | $\begin{aligned} & \text { Rehschnur } \\ & \mathbf{6 x 4} \end{aligned}$ | $\begin{aligned} & \text { Rehschrot } \\ & \dagger \mathbf{6 x 5} \end{aligned}$ | $\begin{aligned} & \text { Rehuiamos } \\ & \mathbf{6 x 6} \end{aligned}$ |
| Each. | \$2.60 | 2.70 | 2.80 | 2.90 | 3.00 |
| Weight each, lbs. | 24 | 24 | 24 | 25 | 25 |

$\dagger$ EXTRA HEAVY.

| Code. <br> Size, inches. | $\begin{aligned} & \text { Rehuias } \\ & \mathbf{2 x 2} \end{aligned}$ | $\begin{aligned} & \text { Rehumecter } \\ & \mathbf{3 x 2} \end{aligned}$ | $\begin{aligned} & \text { Rehumedece } \\ & \mathbf{3 x} \mathbf{3} \end{aligned}$ | $\begin{aligned} & \text { Rehumilier } \\ & \mathbf{4 x} \mathbf{2} \end{aligned}$ | $\begin{gathered} \text { Rehundidas R } \\ \mathbf{4 \times 3} \end{gathered}$ |  | $\begin{aligned} & \text { Rehundimos } \\ & \mathbf{4 \times 4} \end{aligned}$ | Rehundir $5 \times 2$ | Rehurta 5x3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.90 | 1.40 | 1.50 | 1.70 | 1.80 |  | . 90 | 2.70 | 2.80 |
| Weight each, lbs.. | 10 | 14 | 15 | 23 | 25 |  | 25 | 30 | 30 |
| Code Size, inches. |  |  | $\begin{aligned} & \text { Rehurtara } \\ & \mathbf{5 x 4} \end{aligned}$ | $\begin{aligned} & \text { Rehusaste } \\ & \mathbf{5 x 5} \end{aligned}$ | $\begin{gathered} \text { Rehuvais } \\ 6 \times 2 \end{gathered}$ | $\begin{gathered} \text { Rehwild } \\ \mathbf{6 x 3} \end{gathered}$ | Rehziege $6 \times 4$ | $\begin{aligned} & \text { Reibahle } \\ & \mathbf{6 x 5} \end{aligned}$ | Reibbar $6 \times 6$ |
| Each. |  |  | \$2.90 | 3.00 | 3.60 | 3.70 | 3.80 | 3.90 | 4.00 |
| Weight each, |  |  | 32 | 32 | 42 | 43 | 43 | 45 | 45 |


2593.C.

$+2594 . \mathrm{C}$.

INVERTED "Y" BRANCHES.

STANDARD.

| Code $\qquad$ Size, inches. | Reibhamme $\dagger 3 x 2$ | Reibolzes $4 \times 2$ |
| :---: | :---: | :---: |
| Each. | \$1.25 | 1.50 |
| Weight each, lbs. | 8 | 11 |
| $\dagger$ EXTRA HEAVY. |  |  |
| Code $\qquad$ Size, inches. |  | Reiblappen: $4 \times 2$ |
| Each.. |  | \$2.00 |
| Weight each, lbs. |  | 18 |

## DOUBLE INVERTED "Y" BRANCHES

STANDARD.

$\dagger$ Carried in San Francisco only.

## HALF "Y" BRANCHES.

STANDARD.


2597 -C.

| Code. <br> Size, inches | Reibstein -x. | Reibzeug †8x 2 | $\begin{aligned} & \text { Reich } \\ & +\mathbf{X X} \end{aligned}$ | Reichlich $4 \times 2$ | $\begin{gathered} \text { Reichsaar } \\ \mathbf{4 \times : 3} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.60 | 1.00 | 1.10 | 1.30 | 1.40 |
| W'eight each, lbs............. | +1/2 | 6 | $61 / 2$ | 9 | 10 |

Code.
Size, inches.

| $\begin{aligned} & \text { Reichsacht } \\ & \mathbf{\pm \mathbf { x } \ddagger} \end{aligned}$ | $\begin{aligned} & \text { Reichsadel } \\ & \dagger \mathbf{5} \mathbf{2} \end{aligned}$ | Reichsbank $\dagger \mathbf{~} \mathbf{5 x} \mathbf{3}$ †ox3 | Reichserbe †5x4 | $\begin{aligned} & \text { Reichsfus } \\ & +\boldsymbol{\$ x . 5} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| \$1.50 | 1.80 | 1.90 | 2.00 | 2.10 |
| 10 | 13 | $14^{1 / 2}$ | 14 |  |

Code Reichsgeld Reichsgraf Reichsherr Reichsmark Reichspost
Size, inches
$+6 \times 2$
$+6 x 3$
$\dagger 6 x 4$
$\dagger 6 x$
6xo
Each $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . \quad \$ 2.60 \quad 2.70 \quad 2.80 \quad 2.90 \quad 3.00$
Weight each, lbs
15
$151 / 2$
16
16
16

## †EXTRA HEAVY.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline Code. Size, inches \& $\underset{\mathbf{2 x 2}}{\text { Reichsrath }}$ \& Reichstag Re
$\mathbf{3 x 2}$

1.40 \& eichsrogt \& Reichsrolk \& $$
\begin{aligned}
& \text { Reichthum } \\
& \mathbf{4 x} \mathbf{3}
\end{aligned}
$$ \& \[

$$
\begin{gathered}
\text { Reiculorum } \\
\mathbf{4 x 4}
\end{gathered}
$$

\] \& \[

$$
\begin{aligned}
& \text { Reiculos } \\
& \mathbf{5 x} \times \mathbf{2}
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& \text { s Reiculum } \\
& \mathbf{5 x} \mathbf{3}
\end{aligned}
$$
\] <br>

\hline Each \& \$0.90 \& 1.40 \& 1.50 \& 1.70 \& 1.80 \& 1.90 \& 2.70 \& 2.80 <br>
\hline Weight each, lbs . \& 8 \& 10 \& 11 \& 17 \& 18 \& 18 \& 25 \& 25 <br>

\hline Code $\qquad$ Size, inches \& \& Reideras 5xt \& Reidora 5 x 5 \& Reifbiege $6 \times 2$ \& \[
$$
\begin{aligned}
& \text { Reifbinder } \\
& \mathbf{6 x 3}
\end{aligned}
$$

\] \& Reifchen $6 \times 4$ \& \[

$$
\begin{aligned}
& \text { Reifeis } \\
& \mathbf{6 \times 5}
\end{aligned}
$$

\] \& \[

\underset{\mathbf{6 x 6}}{\substack{Reifmesser}}
\] <br>

\hline Each \& \& \$2.90 \& 3.00 \& 3.60 \& 3.70 \& 3.80 \& 3.90 \& 4.00 <br>
\hline Weight each, lbs \& \& 26 \& 26 \& 35 \& 36 \& 36 \& 37 \& 37 <br>
\hline
\end{tabular}

## DOUBLE "Y" BRANCHES.



| Code. Size, inches | $\begin{gathered} \text { Reifmonat } \\ \mathbf{2 x 2} \end{gathered}$ | Reifpunkt <br> +3x 2 | Reifrock 3x 3 | Reifspiel 4x2 |
| :---: | :---: | :---: | :---: | :---: |
| Each | \$1.20 | 1.60 | 1.75 | 1.95 |
| Weight each, lbs | 8 | $101 / 2$ | 11 | $171 / 2$ |


| Code....... | Reifsprung | Reifstab | Reigenhaft | Reigenlauf |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches................... | +4x3 | 4xt | †0x 4 | †5x5 |
| Each | \$2.10 | 2.25 | 3.00 | 3.15 |
| Weight each, lbs ......... | 18 | 18 | 25 | 26 |


| Code. Size, inches | Reigerbos $\dagger 6 \times 2$ | $\begin{aligned} & \text { Reigerhals } \\ & +6 \times 3 \end{aligned}$ | Reigerhut <br> $+6 \mathrm{x} 4$ | $\begin{aligned} & \text { Reigervalk } \\ & +6 \times \overline{5} \end{aligned}$ | $\begin{aligned} & \text { Reigned } \\ & +6 \times 6 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$3.50 | 3.65 | 3.80 | 3.95 | 4.10 |
| Weight each, lbs.. | $351 / 2$ | 36 | $361 / 2$ | 37 | 37 |


| $\dagger$ EXTRA HEAVY. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code $\qquad$ <br> Size, inches $\qquad$ | Reihensaat $\mathbf{2 \times 2}$ | $\begin{aligned} & \text { Reiherfalk } \\ & \mathbf{3 x 3} \end{aligned}$ | Reillere $4 \times 2$ | Reiltopp $4 \times 4$ | $\begin{aligned} & \text { Reimao } \\ & \mathbf{5 x} \mathbf{3} \end{aligned}$ | Reimarie $\overline{j x} 4$ | Reimarus $5 \times 5$ | Reimbark $6 \times t$ | $\underset{\mathbf{6 x 6}}{\text { Reimbody }}$ |
| Each................. | \$1.50 | 2.25 | 2.70 | 3.00 | 3.95 | 4.10 | 4.25 | 5.20 | 5.50 |
| Weight each, lbs.. | 12 | 20 | 30 | 32 | 41 | 42 | 42 | 58 | 60 |

$\dagger$ Carried in San Francisco only.

## DOUBLE HALF "Y'! BRANCHES.

STANDARD.


DOUBLE "T" BRANCHES OR CROSS HEADS.


2602 -C.


2603-C.

STANDARD.


Reinazgo R
Reince $2 x$
$\$ 1.00$
1.35

Reinci
1.50
$.50 \quad 1.5$
Each..................
5
9
10
$111 / 2$
12

| Code | Reincur | Reindicata | Reinduce |  | Reinemo |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches......... | 4x4 | †5x4 | +5x5 | $\dagger 6 \mathrm{x} 2$ |  |
| Each | \$1.83 | 2.55 | 2.70 | 2.90 | 3.50 |
| Weight each, lbs.. | 12 | 15 | 16 | 22 | 24 |

## VENTILATING BRANCHES.

STANDARD.


## $\dagger^{\prime \prime}$ T" CLEANOUTS.

## WITH ROUND HAND HOLE AND COVER. STANDARD.



EXTENSION PIECES.


2607 - C.

2608.C.

| STANDARD. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code $\qquad$ <br> Size, inches $\qquad$ |  | $\begin{aligned} & \text { Reinfusing } \\ & +2 \times 4 \end{aligned}$ | Reinheit $2 \times 6$ | $\begin{aligned} & \text { Reinherzig } \\ & \text { 2xS } \end{aligned}$ | $\begin{aligned} & \text { Reinhumer } \\ & \dagger \mathbf{2 x 1 0} \end{aligned}$ | Reinicola $\dagger 2 \times 12$ |
| Each |  | \$0.30 | . 40 | . 45 | . 55 | . 65 |
| Weight each, lbs.. |  | $31 / 2$ | 4 | $4^{1 / 2}$ | $51 / 2$ | 6 |
| Code. <br> Size, inches. | Reinigen $\dagger 3 \mathrm{x} 4$ | Reinless $3 \times 6$ | Reinlich $\dagger 3 x 8$ | $\begin{aligned} & \text { Reinnudel } \\ & \dagger \mathbf{3 \times 1 0} \end{aligned}$ | $\begin{array}{r} \text { Reinol } \\ +3 \times 12 \end{array}$ | Reinquire $\dagger 4 \times 4$ |
| Each... | \$0.50 | . 60 | . 70 | . 80 | . 90 | . 65 |
| Weight each, lbs.................... | 5 | $51 / 2$ | $61 / 2$ | $71 / 2$ | 8 | 6 |
| Code $\qquad$ Size, inches. $\qquad$ | Reinserer $\dagger 4 \times 6$ | Reinseriez $\dagger \pm \mathrm{x} 8$ | $\begin{aligned} & \text { Reinsert } \\ & \dagger \mathbf{\dagger \times 1 0} \end{aligned}$ | Reinspect $\dagger 4 \times 12$ | Reinspirer $\dagger 5 \times 6$ | $\begin{aligned} & \text { Reinst } \\ & +6 \times 6 \end{aligned}$ |
| Each ................................. | \$0.75 | . 85 | 1.00 | 1.15 | . 95 | 1.20 |
| Weight each, lbs .................. | 7 | 8 | $91 / 2$ | $101 / 2$ | 9 | 12 |

## †EXTRA HEAVY.

Code. $\qquad$ .... Reinstitue Rein

| Size, inches......... | $\mathbf{2 x} \mathbf{6}$ | $\mathbf{2 x} \mathbf{8}$ | $\mathbf{2 x 1 0}$ | $\mathbf{3 x} 6$ | $\mathbf{3 x} \mathbf{8}$ | $\mathbf{3 x 1 0}$ | $\mathbf{4 x} \mathbf{6}$ | $\mathbf{4 x} \mathbf{8}$ | $\mathbf{4 x 1 0}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each $\ldots \ldots \ldots \ldots \ldots .$. | $\$ 0.60$ | .70 | .80 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| Weight each, $1 \mathrm{bs} \ldots$ | $51 / 2$ | 6 | 7 | 10 | 12 | 14 | 14 | 16 | 19 |

## OFFSETS.

| Code Size, inches | Reisammer $+3 \times 4$ | $\begin{aligned} & \text { Reisbau } \\ & \dagger 3 \times 6 \end{aligned}$ | $\begin{aligned} & \text { Reisbedden } \\ & \dagger \mathbf{3 \times 8} \end{aligned}$ | Reisbesen $\dagger \mathbf{3} \times 10$ | $\begin{aligned} & \text { Reisblad } \\ & \dagger \mathbf{~} \times 12 \end{aligned}$ | Reisboek $\dagger 4 \times 2$ | Reisbrief $4 \times 4$ | $\begin{gathered} \text { Reisbrot } \\ 4 \times 6 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.90 | 1.00 | 1.10 | 1.25 | 1.40 | 85 | 1.00 | 1.15 |
| Weight each, lbs.......... | $51 / 2$ | 7 | 8 | 9 | $91 / 2$ | $81 / 2$ | 9 | $91 / 2$ |


| Code. <br> Size, inches | Reisbund $4 \times 8$ | Reisbutus $4 \times 10$ | $\begin{aligned} & \text { Reisdecken } \\ & \mathbf{4 \times 1 2} \end{aligned}$ | $\begin{aligned} & \text { Reisebild } \\ & \mathbf{4 \times 1 4} \end{aligned}$ | $\begin{aligned} & \text { Reisebuch } \\ & \mathbf{4 \times 1 6} \end{aligned}$ | Reisedecke $4 \times 18$ | $\begin{aligned} & \text { Reisegeld } \\ & \mathbf{4 \times 2 0} \end{aligned}$ | $\begin{aligned} & \text { Reisehut } \\ & \text { †5x } 4 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$1.30 | 1.45 | 1.60 | 1.80 | 2.00 | 2.25 | 2.50 | 1.70 |
| Weight each, lbs........... | 12 | 13 | 15 | 17 | 19 | 21 | 23 | 11 |


| Code Size, inches. | Reisejacke $\dagger 5 \times 6$ | $\begin{gathered} \text { Reisekappe } \\ \dagger \boldsymbol{\dagger} \times 8 \end{gathered}$ | Reisekarte $\dagger 5 \times 12$ | $\begin{aligned} & \text { Reisekleid } \\ & \boldsymbol{\dagger 6 \times 4} \end{aligned}$ | Reiselade $+6 \times 6$ | Reiselied $\dagger 6 \times 8$ | $\begin{aligned} & \text { Reiselust } \\ & \boldsymbol{+ 6 \times 1 2} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$1.90 | 2.10 | 2.50 | 2.00 | 2.25 | 2.50 | 3.00 |
| Weight each, lbs.. | $121 / 2$ | 15 | 20 | 14 | 18 | 22 | 27 |

## $\dagger$ EXTRA HEAVY.



| Code | Re | eisgenpa | eisgenpt | eisgenpuz | Reisgenq | Reisgenr | Reisgen | Reisgenure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches.................. | $4 \times 8$ | $4 \times 10$ | $4 \times 12$ | $4 \times 14$ | $4 \times 16$ | $4 \times 20$ | $6 \times 6$ | $6 \times 12$ |
| Each | \$1.80 | 2.00 | 2.25 | 2.50 | 2.75 | 3.75 | 3.25 | 4.00 |
| Weight each, lbs........... | $15^{1 / 2}$ | 19 | 23 | 26 | 30 | 34 | 32 | 51 |

$\dagger$ Carried in San Francisco only.

## †"T" SADDLE HUBS.

## $\underbrace{\text {-A }}_{+2614-\mathrm{C}}$

| Code Size, inches. |  | $\begin{aligned} & \text { Reisgerste } \\ & \mathbf{4 x 2} \end{aligned}$ | Reisgezel $4 \times 3$ | Reisgoed $4 \times 4$ | $\begin{aligned} & \text { Reisigholz } \\ & \mathbf{5 x 2} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each |  | \$0.60 | . 60 | . 60 | 75 |
| Weight each, lbs |  | $31 / 4$ | $31 / 2$ | $31 / 4$ | $31 / 4$ |
| Code $\qquad$ Size, inches.. | $\begin{aligned} & \text { Reisholz } \\ & \mathbf{5 x 3} \end{aligned}$ | Reisje <br> $5 \times 4$ | $\begin{aligned} & \text { Reiskist } \\ & \mathbf{6 x 2} \end{aligned}$ | $\begin{aligned} & \text { Reiskoffer } \\ & \mathbf{6 x 3} \end{aligned}$ | Reiskorn $6 \times 4$ |
| Each | \$0.75 | . 75 | 1.10 | 1.10 | 1.10 |
| W'eight each, lbs. | $31 / 4$ | $51 / 2$ | 31/4 | 31/4 | 6 |


$\dagger 2615-\mathrm{C}$.

## $\dagger^{\prime \prime} Y$ " SADDLE HUBS.

STANDARD.

| Code $\qquad$ Size, inches. | $\begin{aligned} & \text { Reiskosten } \\ & \mathbf{2 x 2} \end{aligned}$ | $\begin{aligned} & \text { Reiskuchen } \\ & \mathbf{4 \times 2} \end{aligned}$ | Reislauf $4 \times 3$ | $\begin{aligned} & \text { Reismaal } \\ & \mathbf{4 \times 4} \end{aligned}$ | $\begin{aligned} & \text { Reismakker } \\ & \mathbf{6 x 2} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.35 | . 70 | 70 | 70 | 1.25 |
| Weight each, lbs................ | $21 / 2$ | $21 / 2$ | 43/4 | $61 / 4$ | $21 / 2$ |

## †HALF "Y" SADDLE HUBS.

STANDARD.

$\dagger$ PIPE BANDS.

$\dagger$ Carried in San Francisco only.

## $\dagger$ INCREASERS.



REDUCERS.
STANDARD.

| Code. | Reistasch $3 \times 2$ | Reistruhe | Reitbahn <br> $4 \times 3$ | Reitelholz | Reitende $+5 \times 3$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.50 | . 65 | . 65 | 85 | 85 |
| Weight each, lbs. | 3 | 4 | 4 | $51 / 2$ | 6 |
| Code Size, inches | $\begin{aligned} & \text { Reitesel } \\ & \mathbf{5 x 4} \end{aligned}$ | $\begin{aligned} & \text { Reitgaul } \\ & +\mathbf{6 x} \mathbf{2} \end{aligned}$ | Reitgurtes †6x3 | $\begin{aligned} & \text { Reithengst } \\ & \mathbf{6 x 4} \end{aligned}$ | $\begin{aligned} & \text { Reithose } \\ & +\mathbf{t} \mathbf{x} \tilde{y} \end{aligned}$ |
| Each. | \$0.85 | 1.00 | 1.00 | 1.00 | 1.00 |
| Weight each, lbs. | 6 | $71 / 2$ | 8 | $81 / 2$ | 8 |

$\dagger$ EXTRA HEAVY.

| Code $\qquad$ Size, inch | Reithrodon $3 \times 2$ | Reitjacke $4 \times 2$ | Reitjunge 4 x 3 | Reitkissen $5 \times 2$ | Reitkleid $5 \times 8$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each. | \$0.60 | . 75 | . 75 | 1.10 | 1.10 |
| Weight each, lbs. | 4 | 5 | 6 | $71 / 2$ | 8 |
| Code $\qquad$ Size, inches | $\begin{aligned} & \text { Reitkunst } \\ & \mathbf{5 x 4} \end{aligned}$ | Reitlehen $6 \times 2$ | $\begin{aligned} & \text { Reitochs } \\ & 6 \times 3 \end{aligned}$ | Reitorado $6 \times 4$ | $\begin{aligned} & \text { Reitoral } \\ & \mathbf{6 x 5} \end{aligned}$ |
| Each. | \$1.10 | 1.35 | 1.35 | 1.35 | 1.35 |
| Weight each, lbs. | 8 | 10 | $101 / 2$ | 11 | 11 |



2622-C.

## VENTILATING CAPS.

STANDARD.

| Code. | Reitpost | Reitrock | Reitross |
| :---: | :---: | :---: | :---: |
| Size, inches. | 2 | +3 | $\pm$ |
| Each | \$0.40 | 60 | . 80 |
| Weight each, lbs. | 3 | $33 / 4$ | 8 |

$\dagger$ Carried in San Francisco only.

## $\dagger$ TRAP COVERS.

STANDARD.

$\dagger 2625-\mathrm{C}$.


2627-C.

| Code Size, inches.. | $\underset{\mathbf{2}}{\text { Rẹitsattel }}$ | $\begin{gathered} \text { Reitstall } \\ \mathbf{3} \end{gathered}$ | $\underset{\boldsymbol{4}}{\text { Reitstock }}$ | Reittasche | $\underset{6}{\text { Reittenne }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each . | \$0.12 | . 16 | . 20 | . 30 | . 40 |
| Weight each, lbs. | 1 | $11 / 2$ | 13/4 | $13 / 4$ | 2 |

## EXTRA HEAVY.

| Code...... ... Size, inches. | $\underset{\mathbf{2}}{\text { Reitrogt }}$ | $\begin{gathered} \text { Reitwegen } \\ \mathbf{3} \end{gathered}$ | Reitzeug 4 | $\begin{gathered} \text { Reixelo } \\ \underset{\mathbf{j}}{ } \end{gathered}$ | $\mathbf{6}^{\text {Reizbares }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.18 | . 25 | . 30 | . 40 | . 50 |
| Weight each, lbs.................... | ..... | ..... | ..... | ..... | ..... |

## SINGLE HUBS.

STANDARD.

| Code $\qquad$ Size, inches | $\underset{( }{\text { Reizend }}$ | Reizung †3 | $\underset{ \pm}{\text { Rejailler }}$ |
| :---: | :---: | :---: | :---: |
| Each | \$0.30 | . 50 | . 65 |

## DOUBLE HUBS.




| Rejalgar | Rejaser |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | $\mathbf{8}$ | Rejaunir <br> $\mathbf{4}$ | Rejectabis <br> $\mathbf{5}$ | Rejectavit <br> $\mathbf{6}$ |
| $\$ 0.30$ | .55 | .70 | 1.00 | 1.20 |
| 3 | 4 | 6 | 8 | 10 |

2628.C.


2629 - C.

## STRAICHT SLEEVES.

STANDARD.

| Code Size, inches | Rejotonner | Rejotons †3 | $\begin{aligned} & \text { Rejetteras } \\ & \neq \end{aligned}$ | Rejicula $\dagger$ | $\begin{gathered} \text { Rejillas } \\ +6 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.30 | . 5.5 | T0 | 1.00 | 1.20 |
| Weight each, lbs... | 23/4 | 4 | 5 | $61 / 2$ | 63/4 |

+ Carried in San Francisco only.


## PIPE PLUGS.

## STANDARD.

| - | Code <br> Size, inches | Rejitaba 2 | Rejitaras $+3$ | Rejitaste 4 | Rejoicing †5 | Rejoignons $+6$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Each. | \$0.15 | . 25 | . 30 | . 40 | . 50 |
| 2632-C. | Weight each, lbs......................... | $11 / 4$ | $13 / 4$ | 3 | $41 / 2$ | $51 / 2$ |

## PIPE RESTS.



STANDARD.


CAST IRON DRUM TRAPS.
WITH NICKEL-PLATED BRASS TRAP SCREW.

$\dagger 2640-\mathrm{C}$.

## INLET AND OUTLET 2-INCH HUB OPENINGS FOR CAST SOIL PIPE.



Note:-The above Drum Trap is so constructed that a very deep Water Seal is obtained and the center of all openings are kept on a line. A clean-out screw on the inside can be removed in case of stoppage, by first removing the Trap Screw and then the clean-out screw access is had to all parts of the Trap, and the inlet and outlet pipes can be reached for rodding.
†Carried in San Francisco only.

$2645-\mathrm{C}$.

## "S" TRAPS.

STANDARD.

| Code. | Rejoneadas | Rejonear | Rejoneo |
| :---: | :---: | :---: | :---: |
| Size, inches. | 2 | +3 | $\dagger 4$ |
| Each. | \$0.80 | 1.25 | 1.75 |
| Weight each, lbs................ | $51 / 2$ | 10 | 19 |

$\dagger$ THREE-QUARTER " $\mathbf{S}$ " TRAPS.
STANDARD.

| Code.. | Rejourned | Rejudge | Rejuela |
| :---: | :---: | :---: | :---: |
| Size, inches... | 2 | 3 | 4 |
| Each.. | \$0.80 | 1.25 | 1.75 |
| Weight each, lbs.. | $51 / 2$ | ** 10 | 19 |



## HALF "S" OR "P" TRAPS.

STANDARD.


## †EXTRA HEAVY.

| Code. | Relabendos | Relabimur | Relache |
| :---: | :---: | :---: | :---: |
| Size, inches...................... | 2 | 3 | 4 |
| Each. | \$1.25 | 2.00 | 2.75 |
| Weight each, lbs................ | 9 | 18 | 28 |



2648-C.

## "S" TRAPS.

WITH HAND HOLE AND COVER. STANDARD.
Code. $\qquad$ .Relachions Relacionar Relaesimus Relaissiez Relajabas
Size, inches.......... $\dagger 2$ † 4 4 4 †5 $\dagger 6$
Each .................. \$1.00 $1.50 \quad 2.00 \quad 3.75 \quad 4.75$

| Weight each, lbs... | 6 | 11 | $201 / 2$ | 28 | 38 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

$\dagger$ Carried in San Francisco only.

$\dagger 2651$ - .
†THREE-QUARTER "S" TRAPS.

| Code............................ | Relajadora | Relajantes | Relajaran |
| :---: | :---: | :---: | :---: |
| Size, inches. | 3 | 4 | 5 |
| Each. | \$1.50 | 2.00 | 3.75 |
| Weight each, lbs... | 11 | $201 / 2$ | 28 |



2652 - ${ }^{\text {C. }}$

$\dagger 2653-\mathrm{C}$.

```
    WITH HAND HOLE AND COVER. STANDARD.
```

| Code............. | Relamber | Relambido | Relamemos | Relamiera |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches....... | $\dagger \mathbf{2}$ | $\dagger \mathbf{3}$ | $\mathbf{4}$ | $\dagger 5$ |
| Each ............. | $\$ 1.00$ | 1.50 | 2.00 | 3.75 |
| Weight each, lbs. | 6 | 11 | $201 / 2$ | 28 |

## $\dagger$ RUNNING TRAPS.

WITH HAND HOLE AND COVER. STANDARD.


## " $\mathbf{S "}$ TRAPS.

WITH $2-I N C H$ TOP VENT. STANDARD.


2654-C.
$\dagger$ Carried in San Francisco only.

$\dagger 2657$ - .

2658. (C.

## $\dagger$ THREE-QUARTER "S" TRAPS.

WITH $2-I N C H$ TOP VENT. STANDARD.

| Code.. | Relanzar | Relanzo |
| :---: | :---: | :---: |
| Size, inches. | $\mathbf{2 x} 2$ | $4 \times 2$ |
| Each | \$1.25 | 2.25 |
| Weight each, lbs.. | 6 | 20 |

## HALF "S" OR "P" TRAPS.

WITH $2-I N C H$ TOP VENT. STANDARD.

†EXTRA HEAVY.

| Code.. | Relapso | Relargage |
| :---: | :---: | :---: |
| Size, inches. | 2x2 | $4 \times 2$ |
| Each ........................................... | \$1.75 | 3.25 |
| Weight each, lbs........................ | 10 | 32 |

## RUNNING TRAPS.

WITH ONE HUB VENT. STANDARD.

$2659 . \mathrm{C}$.

$\dagger$ Carried in San Francisco only.

| Code $\qquad$ Size, inches. $\qquad$ |  | Relargir$+2 \times 2$ | Relargites $\dagger \mathbf{3 x 2}$ | Relatador$\dagger 3 \times 3$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Each |  | \$1.25 | 1.75 | 1.85 |
| Weight each, lbs. |  | $71 / 2$ | $121 / 2$ | $131 / 2$ |
| Code $\qquad$ Size, inches. |  | $\begin{aligned} & \text { Relatando } \\ & \mathbf{4 x 4} \end{aligned}$ | Relatarais $\dagger 5 \times 5$ | Relateron $\dagger 6 \times 6$ |
| Each |  | \$2.50 | 4.50 | 5.50 |
| Weight each, lbs. |  | 23 | 31 | 40 |
|  | $\dagger$ EXTRA | HEAVY. |  |  |
| Code $\qquad$ Size, inches | $\begin{aligned} & \text { Relational } \\ & \mathbf{3 x} 3 \end{aligned}$ | $\begin{aligned} & \text { Relatively } \\ & \mathbf{4 \times 4} \end{aligned}$ | Relativos $5 \times 4$ | Relatores $6 \times 4$ |
| Each... | \$2.60 | 3.50 | 5.25 | 6.75 |
| Weight each, lbs... | 23 | 36 | 53 | 76 |

## RUNNING TRAPS.

WITH TWO HUB VENTS. STANDARD.



| Code.. | Relavabo |
| :---: | :---: |
| Size, inches.. | 4 |
| Each.. | \$2.50 |
| Weight each, lbs | 22 |
| "S"' TRAPS. |  |
| WITH 2-INCH HEEL. STANDARD. |  |
| Code.. | Relavais |
| Size, inches... | 4 |
| Each.. | \$2.25 |
| Weight each, lbs | 21 |


†HALF "S" OR "P" TRAPS.

HALF "S" OR "P" TRAPS.

        WITH \(2-I N C H\) HEEL. STANDARD.
    Code...................................................... Relavaturo
Size, inches.
$t$
Each ..................................................... $\$ 2.25$
Weight each, lbs

$\dagger 2665$ - .
Cut Shows Right Side Connection.
†HALF "S" OR "P" TRAPS.
WITHJHAND HOLE AND COVER AND 2-INCH SIDE CONNECTION RIGHT OR LEFT. STANDARD.

Code.. $\qquad$ Relavavit
Relavavose
Size, inches. $\qquad$ 4 Right hand 4 Left hand
Each. $\$ 3.00$ 3.00

Weight each, lbs $\qquad$ 22
†Carried in San Francisco only.

## ACME BACK WATER SEWER VALVES.

## FOR CAST IRON SOIL PIPE WITH CONCAVE-CONVEX OSCILLATING BRASS CLAPPER

A perfect seal against sewer gas, back water and vermin.
The form of the Clapper and the manner of seaiing and supporting it are important features not found in any other Back Water Valve.

The Oscillating Clapper makes it self-closing and renders it impossible for anything to find lodgment either on clapper or on seat.

2670.C.

## STANDARD.

| Code... | Relavawan | Relavawell | Relavawet |
| :---: | :---: | :---: | :---: |
| Size, inches......... | 4 | 5 | 6 |
| Length over all, inches... | 13 | 15 | $153 / 4$ |
| Each...... | \$5.50 | 7.50 | 9.50 |
| Weight each, lbs... | 21 | 33 | 42 |

## EXTRA HEAVY.

| Code.. | Relavaworn |  |  |
| :---: | :---: | :---: | :---: |
| Size, inches... | 4 | 5 | 6 |
| Length over all, inches.. | 13 | 15 | 153/4 |
| Each. | \$6.50 | 8.50 | 10.50 |
| Weight each, lbs.. | 29 | 41 | 58 |

## SISSON INSERTABLE JOINTS.



## $\dagger$ EXTRA HEAVY.

| Code | elaxandas | Relaxante | Relaxarem | Relaxative | Relaxamns |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches... | 2 | 3 | 4 | 5 | 6 |
| Each | \$1.50 | 1.70 | 2.00 | 2.30 | 2.80 |
| Weight each, lbs.. | 9 | 13 | $153 / 4$ | 21 | $24^{1 / 4}$ |

When after testing a line of pipes, a defective length or fitting was found and had to be taken out, it has been necessary heretofore to break out a length, and often more, leaving at least three joints to be sprung into place, as shown in cut, or to cut short lengths and use double hubs, etc., but with the Sisson Insertable Joint all that is required is to cut out of soil pipe the length of fitting it is desired to insert and $111 / 2$ inches for the Sisson Joint, and slip the lead ring which accompanies it over the pipe above, push joint up as far as possible, as shown in illustration, place " Y " or other fitting in the hub below and drop Joint down into it. The lead ring will drop into the Joint and rest upon the shoulder inside; a little oakum is then placed on top of the lead ring, the lead poured on, and the work is complete. It is not neressary to disturb the pipe above or below to get the slack needed, saving the extra amount of trouble and annoyance of springing pipe into place

[^35]
## GAS PIPE HOOKS.

## PLUMBERS' HOOKS.

TINNED PIPE STRAPS.
$2671 \cdot \mathrm{C}$.

$\dagger$ セ672-C.


2673-c.

GAS PIPE HOOKS-267I-C.
Wrought Steel with Strengthening on the Back.

| Code $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$. | Relaxes | Relayant | Relazables | Relazada | Releasable | Release | Relebas |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches $\ldots \ldots \ldots \ldots \ldots \ldots$ | $3 / 8$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| Per $100 \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$. | $\$ 0.55$ | .65 | .80 | 1.00 | 1.30 | 1.60 | 2.00 |
| Weight per 100, lbs $\ldots \ldots \ldots$. | $11 / 2$ | $13 / 4$ | 3 | $33 / 4$ | 6 | 7 | $91 / 2$ |

## Loose.

†PLUMBERS' HOOKS-2672-C.

## Wrought Steel.



One hundred in a box.
TINNED PIPE STRAPS.
Wrought Steel.

| Code............... | Relegandos | Relegare | Relegation | Relegatore | Relegavit | Relegerunt | Relegieren | Relegisset |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches......... | $\dagger 1 / 4$ | $\dagger 3 / 8$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| Per pound......... | $\$ 0.23$ | .23 | .23 | .23 | .23 | .23 | .23 | .23 |
| Number to $1 \mathrm{lb} \ldots .$. | $\ldots \ldots$. | 47 | 40 | 24 | 21 | 16 | 15 | 9 |

SOIL PIPE HOOKS.

2676.C.

Wrought Steel.

| Code................... | Relego | Releguais | legue |
| :---: | :---: | :---: | :---: |
| Size, inches.......... | 2 | 3 | $\pm$ |
| Each.. | \$0.05 | . 07 | . 09 |
| Weight per 100, lbs | $151 / 2$ | 32 | 55 |
| Code Size, inches |  | Releguons | $\begin{gathered} \text { Releixar } \\ \mathbf{6} \end{gathered}$ |
| Each. |  | \$0.16 | . 20 |
| Weight per 100, lb | . | 91 | 10.5 |

SOIL PIPE STRAPS.

$\dagger 2677$ C.
Wrought Steel.

| Code. | Re | Relejarais | Relejase |
| :---: | :---: | :---: | :---: |
| Size, inches.. | 2 | 3 | $t$ |
| Each.. | \$0.04 | . 06 | . 07 |
| W'eight per 100, lbs | 30 | $421 / 2$ | 50 |
| Code. |  | Releje | Relentar |
| Size, inches |  | 5 | 6 |
| Each. |  | \$0.08 | 11 |
| W'eight per 100, lbs |  | 60 | 70 |

†Carried in San Francisco only.

## GAS FITTERS CEMENT.


2680.c.

| Code | Relentesco |
| :---: | :---: |
| Per lb. | \$0.20 |

Five pounds in a package.

## OAKUM.



268t-C.

| Code. | Relessor | Relevabor |
| :---: | :---: | :---: |
| Grade......................... | Plumbers Spun | Coiled |
| Per bale. | \$3.50 | 4.50 |

Coiled Oakum is put up in 5 -pound coils 10 coils to the bale.

## HANDY PLUMBERS SOIL.



2681-C.

Per dozen cakes................................ \$3.00
Weight per dozen, lbs
One cake in a box; one dozen boxes in a package.

COTTON WASTE.


2685-C.


One hundred pounds in a bale.

SHEET PACKING.


2680-C.
†"ANVIL" SHEET RUBBER PACKING.
Cloth Insertion. 36 Inches Wide.

| Code <br> Thickness, inches. | Relevante 1/32 | $\begin{aligned} & \text { Relevemente } \\ & 1 / 16 \end{aligned}$ | Releveris $3 / 32$ | Releveront 1/8 | Relevor 3/16 | Relha 1/4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per lb | \$0.131/2 | . $131 / 2$ | . $131 / 2$ | . $131 / 2$ | . $131 / 2$ | .131/2 |
| Weight per square yard, lbs ..... | $21 / 2$ | $51 / 2$ | $71 / 2$ | 10 | 15 | 20 |
|  | 150 to 350 pounds in a roll. |  |  |  |  |  |
|  | $\dagger$ "ELK" SHEET RUBBER PACKING. |  |  |  |  |  |
|  | Cloth Insertion. 36 Inches Wide. |  |  |  |  |  |
| Code................................... | Relhote | Reliais | Reliance | Reliant | Relicario | Reliceamur |
| Thickness, inches.................. | 1/32 | 1/16 | 3/32 | 1/8 | 3/16 | 1/4 |
| Per lb................................. | \$0.20 | . 20 | . 20 | . 20 | . 20 | 20 |
| Weight per square yard, lbs ..... | $21 / 2$ | $51 / 2$ | 8 | 11 | 17 | 23 |

150 to 350 pounds in a roll.
†"RED" SHEET PACKING.
An extra fine quality of Red Sheet Packing, for air, gas, steam, water, ammonia, alkali, etc. Will stand great heat without losing its elasticity. Makes a tight joint and will not crack or harden.

| "La Favorite." |  |  |  | "Obelisk." |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 Inches Wide. |  |  |  | With Brass Wire Insertion. 36 Inches Wide. |  |  |  |  |
| Code.. ................ Relicebare Relicendos |  |  | Relichant | Code | .. | Relicheurs | Reliciae | elicinos |
| Thickness, inches. | 1/16 | 3/32 | 1/8 | Thick | ss, inches .. | 116 | 3/32 | 1/8 |
| Per lb ................ | \$0.60 | . 60 | 60 | Per lb |  | \$0.75 | . 75 | 75 |
| Wt. per sq. yd., lb | $61 / 2$ | 10 | $121 / 2$ | Wt. p | sq. yd., lbs | $91 / 2$ | $131 / 2$ | 16 |
| †RUBBERBESTOS SHEET PACKING. |  |  |  |  |  |  |  |  |
| Plain Blue Sheet Packing. 36 Inches Wide. |  |  |  |  |  |  |  |  |
| A perfect combination of Asbestos and Rubber, which, after a thorough test in the most severe places, has given satisfactory results. It stands great heat and high pressure. Can be re-used several times. |  |  |  |  |  |  |  |  |
| Code .............................................................................................. |  |  |  | Relicly | Relictrix | Relictum | Relied | Relieffer |
|  |  |  |  | 1/16 | 3/32 | 1/8 | 3/16 | 1/4 |
| Per lb. |  |  |  | \$0.72 | 72 | . 72 | . 72 | 72 |

†Carried in San Francisco only.

## SECTION 9 .

MISCELLANEOUS SUPPLIES,

SHEET METALS, WIRE;

HOSE, HOSE SUNDRIES,

SOLDER, TOOLS, ETC.


## Holbrook, Merrill \& Stetson, INCORPORATED.

SAN FRANCISCO, LOS ANGELES AND NEW YORK.

We aim to carry a complete assortment of the very best quality of tinners' and plumbers' supplies. The following pages show a great many, but, owing to the rapidity with which new and valuable devices and supplies are being put on the market, it is impossible to show all that we carry.

Our Sheet Iron and Tin Plate is the very best that the mills can turn out.
Tools and Machines are of the very highest grade; are made of the best materials, and are as perfect as skilled mechanics can produce them.

In ordering goods by telegraph from this section it is only necessary to use the code word or words over or opposite the name or number of the articles required, preceded by words from the front of this book.

Example: Crogmar acocheis fenargali and abendzug sheets each fetterave and fevelure.
Translation: Ship via quickest route sixty-five pounds number twelve galvanized wire and twenty-five sheets each twenty-two and twenty-eight galvanized iron thirty by ninetysix.

# FLAT HEAD STOVE BOLTS. 

3/ェ6-INCH DIAMETER.


| Cod | Febritude | Febrodet | t Febrook | Feceden |
| :---: | :---: | :---: | :---: | :---: |
| Length, inch........ | 1/2 | $\dagger 5 / 8$ | 3/4 | 1 |
| Per 100.. | \$0.75 | . 75 | 75 | 80 |
| Weight per 100, lbs | . 8 | 9 | 1.1 | 1.3 |
| Code Length, inches. |  | Fecedrio $11 / 4$ | $\begin{aligned} & \text { Fecelamos } \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & \text { Fecephis } \\ & \mathbf{2} \end{aligned}$ |
| Per 100. |  | \$0.85 | . 90 | 1.00 |
| Weight per $100, \mathrm{lb}$ | ......... | 1.4 | 1.6 | 2.1 |

1/4-INCH DIAMETER.

| Code ......Fecerchi Length, in | 3/4 | Fechagi 1 | Fechak $11 / 4$ | $11 / 2$ | che | 2 | $\begin{aligned} & \text { Fechool } \\ & 21 / 2 \end{aligned}$ | 3 | † $31 / 2$ | $\begin{gathered} \text { Fedag } \\ \dagger 4 \end{gathered}$ | $\begin{aligned} & \text { edalion } \\ & \dagger \mathbf{4} 1 / 2 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per 100.... \$0.90 | . 90 | . 95 | 1.00 | 1.05 | 1.10 | 1.15 | 1.25 | 1.35 | 1.45 | 1.55 | 1.65 |
| Wt.per $100, \mathrm{lbs} 1.9$ | 2.2 | 2.5 | 2.9 | 3.2 | 3.6 | 4. | 4.7 | 5.3 | 6 | 6.75 | 7.75 |

One hundred in a package.

## ROUND HEAD STOVE BOLTS.

5/32-INCH DIAMETER.

| Code | Fedarade | Fedarfe | Fedaron |
| :---: | :---: | :---: | :---: |
| Length, inch | $\dagger 1 / 2$ | †5/8 | $\dagger 3 / 4$ |
| Per 100.. | \$0.85 | 85 | 8 |

3/16-INCH DIAMETER.
Code................. Fedarsis Fedartello Fedauds Fedaxas

| Length, inch....... $1 / 2$ | $\dagger 5 / 8$ | $3 / 4$ | 1 |
| :--- | :--- | :--- | :--- | :--- |

Per $100 \ldots \ldots . . . . . .$. . $\$ 0.85$. 85 . 85.90
Weight per 100,lbs $1 . \quad 1.1 \quad 1.1 \quad 1.4$


| Code................ | Fedegam | Fedentem | Fedentis | Fedenza |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Length, inches.... | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\dagger \mathbf{1 3 / 4}$ | $\dagger \mathbf{2}$ |
| Per $100 \ldots \ldots \ldots \ldots .$. | $\$ 0.95$ | 1.00 | 1.05 | 1.10 |
| Weight per 100,lbs | 1.5 | 1.8 | 2. | 2.2 |


| Code | Federal | Federbast | Federboom |
| :---: | :---: | :---: | :---: |
| Length, inch. | 1/2 | 3/4 | 1 |
| Per 100.. | \$1.00 | 1.00 | 1.05 |
| Weight per 100, lbs | 2.3 | 2.6 |  |


| Code | Federbosch | Federhars | ut |
| :---: | :---: | :---: | :---: |
| Length, inches.......... | 11/4 | $11 / 2$ | $\dagger 2$ |
| Per 100.. | \$1.10 | 1.15 | 1.25 |
| Weight per 100, lbs..... | 3.4 | 3.6 | 4.2 |
| One hundred in a package. |  |  |  |

## TINNED BURRS.

MADE FROM SWEDES IRON.


Cuts show full size.

Code. Federian

Federito
Federolie
Numbers........................... $\dagger 6$
Number to a pound ........ 330
368
398
Per pound ..................... \$0.43 . 44 . 45
One pound in a package. Number denotes size of wire.
$\dagger$ Carried in San Francisco only.

## TINNERS' RIVETS.



Cuts show full size.
Black Iron, in Packages.

| Code Size, ounces |  |  |  |  |  | Federont 8 |  | Fediamo 10 | Fedimento 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per 1000 |  |  |  |  |  | \$0.20 |  | . 22 | . 24 |
| Case lots, 1000. |  |  |  |  |  |  |  | ..... |  |
| Code $\qquad$ Size, pounds |  |  |  | Fedonem 1 | Fedoniate $\dagger 11 / 4$ | Fedopolis $11 / 2$ | Fedorum $\dagger 13 / 4$ | $\begin{gathered} \text { Fedotano } \\ \mathbf{2} \end{gathered}$ | $\begin{aligned} & \text { Fedraaf } \\ & \dagger \mathbf{2 1 / 2} \end{aligned}$ |
| Per 1000. |  |  |  | \$0.27 | . 29 | . 33 | . 37 | . 42 | . 55 |
| Case lots, 1000 |  |  |  | ...... | ..... | $\ldots$ | ..... | 96 | 70 |
| Code. Size, pounds. | Fedraden $\dagger 3$ | Fedremo $\dagger 4$ | Fedrezes $\dagger 5$ | Fedriamo $\dagger 6$ | Fedricaret $\dagger 7$ | Fedriva $\dagger 8$ | Fedronde $\dagger 10$ | $\begin{aligned} & \text { le Fedroost } \\ & \dagger \mathbf{1 2} \end{aligned}$ | Fedrotael $\dagger 14$ |
| Per 1000............ | \$0.60 | . 76 | . 90 | 1.08 | 1.26 | 1.44 | 1.75 | 1.96 | 2.31 |
| Case lots, 1000.... .. | 60 | 48 | 37 | 30 | 25 | 24 | 20 | 16 | $\ldots$ |

One thousand in a package. Approximate weight of cases two hundred pounds.


One hundred pounds in a keg.
Tinned Norway Iron, in Packages.

| CodeSize, |  |  |  |  |  | Feedalas $\dagger 4$ | Feedames $\dagger 6$ | $\begin{gathered} \text { Feedasse } \\ \dagger 8 \end{gathered}$ | Feedatha $\dagger 10$ | Feedava $\dagger 12$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per 1000... |  |  |  |  |  | \$0.28 | . 28 | . 28 | . 31 | . 35 |
| Code ........... Size, pounds |  |  |  |  |  | Feedeas $\dagger 1$ | Feedelfo $\dagger 11 / 4$ | Feedendi $\dagger 11 / 2$ | Feedero $\dagger 13 / 4$ | Feedevin $\dagger 2$ |
| Per 1000. |  |  |  |  |  | \$0.42 | . 48 | . 55 | . 64 | 72 |
| Code............. Size, pounds... | $\begin{gathered} \text { Feediato } \\ \dagger \mathbf{~} 1 / 2 \end{gathered}$ | Feediger $\dagger 3$ | Feedinas $\dagger 31 / 2$ | Feedoen $\dagger 4$ | Feedom $\dagger 5$ | Feedoner $+6$ | $\begin{aligned} & \text { Feedonot } \\ & 7 \end{aligned}$ | Feedotier 8 | Feedrift 10 | Feedrigo $\dagger 12$ |
| Per 1000........ | \$0.83 | 1.05 | 1.22 | 1.36 | 1.65 | 1.98 | 2.31 | 2.64 | 3.25 | 3.76 |

## Tin Plated Soft Steel, in Packages.

| Code............ <br> Size, ounces | $\begin{aligned} & \text { Feedrina } \\ & 8 \end{aligned}$ | $\begin{aligned} & \text { Feedroth } \\ & \mathbf{1 0} \end{aligned}$ | $\begin{aligned} & \text { Feedruf } \\ & 12 \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Per 1000. | \$0.24 | . 27 | 30 |


| Code......... Feedrupt | Feeduto | Feegement | Feegewa | Feegewalt | Feeglipt | Feegluth | Feegold | Feegory | Feegostar | Feegovant |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, pounds | $\mathbf{1}$ | $\mathbf{1 1 / 4}$ | $\mathbf{1} 1 / 2$ | $\mathbf{1 3} / 4$ | $\mathbf{2}$ | $\mathbf{2 1 / 2}$ | $\mathbf{3}$ | $\mathbf{3} 1 / 2$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
| Per $1000 \ldots \ldots$ | $\$ 0.35$ | .39 | .45 | .51 | .58 | .75 | .84 | .98 | 1.08 | 1.30 | 1.56 |

## TINNERS' RIVETS.

## Copper, in Packages.

| Code. |  |  | Feegreer |
| :---: | :---: | :---: | :---: |
| Size, ounces |  |  | 12 |
| Per 1000. |  |  | \$0.50 |
| Code $\qquad$ Size, pounds | Feekern 1 | Feekidas $11 / 2$ | $\begin{aligned} & \text { Feekleur } \\ & \boldsymbol{Q} \end{aligned}$ |
| Per 1000. | \$0.60 | . 75 | . 80 |

One thousand in a package. Case lots same as black.
Approximate Dimensions of Tinners' Rivets:
English Standard Gauge.


## †OVAL HEAD IRON RIVETS.

BLACK.

| Code............... | Feeknot | Feelavius | Feelebit | Feelectos |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size bs........ | $\mathbf{2}$ | $\mathbf{2 1} / 2$ | $\mathbf{3}$ | $\mathbf{4}$ |  |
| English Stand- |  |  |  |  |  |
| ard Gauge..... | 11 | 10 | 9 | 6 |  |
| Length, inch..... | $1 / 2$ | $1 / 2$ | $1 / 2$ | $1 / 2$ |  |
| Per 1000 | $\ldots \ldots \ldots$. | $\$ 0.62$ | .75 | .80 | .96 |
| One thousand in a package. |  |  |  |  |  |

## †OVAL HEAD IRON RIVETS.

BLACK.

| Code | Feeleput | Feelerus | Feeliano |
| :---: | :---: | :---: | :---: |
| Wire gauge | 7 | 6 | 6 |
| Length, inch | 3/4 | 1 | 11/4 |
| Per pound | 0.21 1/2 | 21 | 21 |
| Rivets in a pound........ | 129 | 82 | 69 |
| Code | Feelitif | Feelogo | Feelordo |
| Wire gauge | 6 | 6 | S |
| Length, inches | $11 / 2$ | 13/4 | 11/4 |
| Per pound | 21 | . 21 | 22 |
| Rivets in a pound........ | 59 | 55 | 109 |
| One pound in a package. |  |  |  |

$\dagger$ Carried in San Francisco only.

OVAL HEAD RIVETS.
BRASS.
For Spice Can Tops.


## STOVE PIPE ELBOW RIVETS.

BLACK. FLAT HEAD.
Code. Feemalis
IVire gauge
14
Length, inch
$1 \frac{1}{164}$
Per pound
$\$ 0.66$

## BRAZIERS' COPPER RIV̊ETS.



No. 2.


Cuts show full size.

Feemarch Feemians Feemical Feemicos Feemists Feemiter Feemogen Feemos Feenacis Feenare
Code..

| 0 | 1 | 2 |
| :---: | :---: | :---: |
| 148 | 100 | 70 |
| $3 / 16$ | $1 / 4$ | $17 / 64$ |
| $3 / 8$ | $1 / 2$ | $1 / 2$ |



| 7 | $\mathbf{8}$ | 9 |
| :---: | :---: | :---: |
| 12 | 9 | 6 |
| $7 / 16$ | $1 / 2$ | $19 / 32$ |
| $15 / 16$ | $11 / 8$ | $1 / 4$ |

$\dagger$ FEEDER CAPS AND COLLARS. BRASS.



One gross in a box.

## †OILER SCREWS AND HOOPS.

BRASS.

| Code.. | Feenest | Feenique | Feenitine |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
| Diameter, inch.................... | 3/8 | 1/2 | 5/8 |
| Per gross........................... | \$9.00 | 10.00 | 12.00 |
| Weight per gross, lbs........... | 3/4 | 3/4 | 7/8 |
| Five hundred | in a box |  |  |



## SOLID LAMP HOOPS.

BRASS.



Five hundred in a box.
$\dagger$ Carried in San Francisco only.

## PERFORATED TIN.



No. 0.


No. 3.


No. 4

EXTRA CHARCOAL.

| Code. | Numbers. | Thickness. | Size Sheet, Inches. | Sheets in Box. | Weight per Box. | Per Dozen Sheets |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Felmutes . | 0 | IC | $10 \times 14$ | 225 | 87 lbs . | \$3.50 |
| Felonite ........... | 1 | IC | $10 \times 14$ | 225 | 76 " | 3.00 |
| Felpan ........... | 2 | IC | $10 \times 14$ | 225 | 71 " | 2.50 |
| Felschoxan ...... | $\dagger 1$ | IXX | $10 \times 14$ | 225 | ..... | 3.50 |
| Felschozde....... | †2 | IXX | $10 \times 14$ | 225 |  | 3.50 |
| Felschot ........... | 3 | IXXXX | $10 \times 14$ | 225 | 118 " | 3.50 |
| Felschude......... | +0 | IC | $14 \times 20$ | 112 | 88 " | 6.00 |
| Felschuff........... | $\dagger 1$ | IC | $14 \times 20$ | 112 | 82 " | 6.00 |
| Felschum......... | +3 | IC | $14 \times 20$ | 112 |  | 6.00 |
| Felschur .......... | +1 | IXX | $14 \times 20$ | 112 | 125 " | 6.00 |
| Felsogno......... | $\dagger 2$ | IXX | $14 \times 20$ | 112 | 121 " | 6.00 |
| Felspiel .. ........ | $\dagger 3$ | IXX | $14 \times 20$ | 112 | 115 " | 6.00 |
| Felstar ........... | $\dagger 4$ | IXX | $14 \times 20$ | 112 | 100 " | 6.00 |
| Felwasser ......... | 5 | IXX | $14 \times 20$ | 112 | 97 " | 6.00 |
| Felwerk ........... | 6 | IXX | $14 \times 20$ | 112 | 79 " | 6.00 |
| Felwitz .............. | †3 | IXXXX | $14 \times 20$ | 112 | 118 " | 7.00 |
| Felzaron........... | $\dagger 4$ | IXXXX | $14 \times 20$ | 112 | 103 " | 7.00 |
| Felzei1 ............ | $\dagger 5$ | IXXXX | $14 \times 20$ | 112 | 100 " | 7.00 |
| Felzione . ........ | $\dagger 6$ | IXXXX | $14 \times 20$ | 112 | 82 " | 7.00 |

## COKE.

| Code. | Numbers. | Thickness. | Size Sheet, Inches. | Sheets in Box. | Weight per Box. | Per Dozen Sheets. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Femacan | † | IC | $10 \times 14$ | 225 | 71 lbs . | \$2.50 |
| Femacris ......... | $\dagger 4$ | IC | $10 \times 14$ | 225 | 69 " | 2.50 |
| Femalden ........ | †5 | IC | $10 \times 14$ | 225 | 63 " | 250 |
| Femaloid ........ | $\dagger 0$ | IC | $14 \times 20$ | 112 | 87 " | 7.00 |
| Femalung ........ | +1 | IC | $14 \times 20$ | 112 | 85 " | 5.00 |
| Femanzar ........ | †2 | IC | $14 \times 20$ | 112 | 72 " | 5.00 |
| Femaorum...... | +3 | IC | $14 \times 20$ | 112 | 71 ، | 5.00 |
| Femaquer ........ | $\dagger 4$ | IC | $14 \times 20$ | 112 |  | 5.00 |

Table showing sizes of perforations in inches, number of perforations to the lineal inch, wire gauge of holes, and comparison numbers of slotted screens, meshes of wire screens and needle punch.

| Numbers. | Style. | Diameter of Holes, Inches. | Holes to Lineal Inch. | Wire Gauge of Holes. | Comparison No. Slotted Screens. | Comparison Mesh Wire Screens. | Comparison No. Needle Punch. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | Extra Fine... | . 027 | 20 | 22 B. \& S. | No. 9 | 45 | 7 |
| 1 | Fine ..... | . 033 | 18 | 19 " | " 7 | 35 | 5 |
| 2 | Medium..... | . 042 | 15 | 17 " | " 5 | 25 | 3 |
| 3 | Coarse..... .. | . 050 | 12 | 16 " | " 3 | 15 | 1 |
| 4 | " ......... | . 066 | 10 | 14 " | ... |  | 00 |
| 5 | " ......... | . 072 | $71 / 2$ | 13 " | ... |  | ... |
| 6 | Extra Coarse | . 106 | $71 / 2$ | 10 " | ... |  | ... |

$\dagger$ Carried in San Francisco only.


## STEEL WIRE.



## ANNEALED MARKET WIRE.

100-Pound Bundles

| Code | Femarsine | Femarus | Femascato | Femdanza | Femegass | Femegava |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | 7 | 8 | 9 | 10 | 11 | 12 |
| Per pound | \$0.10 | . 10 | . 10 | . 11 | . 11 | .11/22 |
| Code. | Femelar | Femelete | Femelicas | Femescam | Femicetta | Femigella |
| Numbers. | 13 | 14 | 15 | 16 | 17 | 18 |
| Per pound | $121 / 2$ | . $121 / 2$ | . 14 | . 14 | . 15 | . 16 |

Numbers $13,14,15$ and 16 are used for Baling Wire.

## BRIGHT MARKET WIRE.

## 63-Pound Bundles

| Code | Femikoos | Femillos | Femitant | Femizen | Femodonal | Femogato | Femoidal | nite | Femoribus | Fempacht |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Per pound.. | \$0.10 | . 10 | . 10 | 10 | . 10 | . 10 | . 10 | . 10 | 10 | 10 |
| Code...... <br> Numbers |  | Fempapst. 10 | Fempelle 11 | Femperst 12 | Fempiendo 13 | Femsech 14 | $\begin{gathered} \text { Femsico } \\ 15 \end{gathered}$ | Femsilio 16 | Fenacione 17 | $\begin{gathered} \text { Fenaidum } \\ 18 \end{gathered}$ |
| Per pound |  | \$0.11 | . 11 | . $1111 / 2$ | . $121 / 2$ | . $121 / 2$ | . 14 | . 14 | . 15 | . 16 |

## GALVANIZED MARKET WIRE.

100 -Pound Bundles.

| Code .... Numbers | $\begin{aligned} & \text { Fenaldoli } \\ & \mathbf{2} \end{aligned}$ | $\begin{gathered} \text { Fenalisalz } \\ \mathbf{3} \end{gathered}$ | $\begin{aligned} & \text { Fenaltic } \\ & \mathbf{4} \end{aligned}$ | $\begin{gathered} \text { Fenamilla } \\ \mathbf{j} \end{gathered}$ | $\begin{gathered} \text { Fenance } \\ 6 \end{gathered}$ | $\begin{aligned} & \text { Fenanken } \\ & 7 \end{aligned}$ | $\begin{gathered} \text { Fenannas } \\ 8 \end{gathered}$ | $\begin{aligned} & \text { Fenantem } \\ & \mathbf{9} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per pound | \$0.10 | . 10 | 10 | . 10 | . 10 | . 10 | 10 | 10 |
| Code .... <br> Numbers | Fenanthen 10 | Fenappen 11 | Fenargali 12 | Fenascius 13 | Fenatica 14 | Fenazite 15 | Fencable 16 | Fencants 18 |
| Per pound | \$0.11 | . 11 | . $111 / 2$ | . $121 / 2$ | . $121 / 2$ | . 14 | . 14 | . 16 |

†Carried in San Francisco only

## COPPERED MARKET WIRE.

## 63-Pound Bundles.

| Code...... Numbers | Fencay <br> 1 | Fenchada $\mathbf{2}$ | Fenchean $\mathbf{3}$ | Fenchone | Fenciado 5 | $\begin{aligned} & \text { Fendemia } \\ & \mathbf{6} \end{aligned}$ | Fendieron 7 | $\begin{gathered} \text { Fendritt } \\ 8 \end{gathered}$ | Fendrosi 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per pound | \$0.10 | 10 | 10 | . 10 | 10 | . 10 | 10 | 10 | 10 |
| Code....... <br> Numbers | $\begin{aligned} & \text { Fenelines } \\ & \mathbf{1 0} \end{aligned}$ | $\begin{aligned} & \text { Fenepoti } \\ & \mathbf{1 1} \end{aligned}$ | Fenerabil $12$ | Fenevolus 13 | Fengoar 14 | Fengott 15 | $\begin{aligned} & \text { Fengulado } \\ & \mathbf{1 6} \end{aligned}$ | $\begin{gathered} \text { Fenhafiz } \\ \mathbf{1 7} \end{gathered}$ | $\begin{gathered} \text { Fenhassar } \\ 18 \end{gathered}$ |
| Per pound | \$0.11 | . 11 | .111/2 | .121/2 | . $12^{1 / 2}$ | . 14 | . 14 | . 15 | . 16 |
| TINNED WIRE. 63-Pound Bundles. |  |  |  |  |  |  |  |  |  |
| Code .... <br> Numbers |  | Fenhegan 6 | Fenhiras 7 | Fenhonso 8 | Fenicale <br> 9 | $\begin{gathered} \text { Fenicots } \\ 10 \end{gathered}$ | $\begin{gathered} \text { Feniscope } \\ 12 \end{gathered}$ | $\begin{gathered} \text { Fenmah } \\ \mathbf{1 4} \end{gathered}$ | $\begin{aligned} & \text { Fenmule } \\ & \mathbf{1 6} \end{aligned}$ |
| Per pound |  | \$0.15 | . 15 | . 15 | . 15 | . 16 | . 17 | 17 | . $171 / 2$ |

## ANNEALED STONE WIRE.

## 12-Pound Bundles.

| Code............ Fennebit | Fennetti | Fennetur | Fennibus | Fennita | Fennista | Fennosco | Fenodator | Fenolied |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers $\ldots \ldots \ldots$ | $\mathbf{1 6}$ | $\mathbf{1 7}$ | $\mathbf{1 8}$ | $\mathbf{1 9}$ | $\mathbf{2 0}$ | $\mathbf{2 1}$ | $\mathbf{2 2}$ | $\mathbf{2 3}$ | $\mathbf{2 4}$ |
| Per pound $\ldots \ldots$ | $\$ 0.14$ | .15 | .16 | .19 | .20 | .21 | .22 | .23 | .24 |

## GALVANIZED STONE WIRE.

## 12-Pound Bundles.



Steel wire numbered according to American Steel Wire Company's gauge.
Table of Size, Weight, Length and Strength of Iron Wire.

| Wire Gauge. Number. | Diameter, Inches. | Pounds Per 100 Feet. | Pounds Per Mile. | Feet in 63 Pounds. | Feet in 100 Pounds. | Breaking <br> Weight, Pounds. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | . 307 | 24.97 | 1,318.41 | 228 | 399 | 5,926 |
| 1 | . 283 | 21.23 | 1,120.94 | 296 | 468 | 5,226 |
| 2 | . 263 | 18.34 | 968.35 | 343 | 544 | 4,570 |
| 3 | . 244 | 15.78 | 733.18 | 399 | 631 | 3,948 |
| 4 | . 225 | 13.42 | 708.57 | 470 | 738 | 3,374 |
| 5 | . 207 | 11.35 | 559.28 | 555 | 875 | 2,839 |
| 6 | . 192 | 9.77 | 515.85 | 647 | 1,017 | 2,476 |
| 7 | . 177 | 8.30 | 438.24 | 759 | 1,197 | 2,136 |
| 8 | . 162 | 6.96 | 367.48 | 905 | 1,429 | 1,813 |
| 9 | . 148 | 5.80 | 306.24 | 1,086 | 1,705 | 1,507 |
| 10 | . 135 | 4.83 | 255.02 | 1,304 | 2,057 | 1,233 |
| 11 | . 120 | 3.82 | 201.69 | 1,649 | 2,582 | 1,010 |
| 12 | . 105 | 2.92 | 154.17 | 2,158 | 3,369 | 810 |
| 13 | . 092 | 2.24 | 118.27 | 2,813 | 4,478 | 631 |
| 14 | . 080 | 1.69 | 89.23 | 3,728 | 5,858 | 474 |
| 15 | . 072 | 1.37 | 72.33 | 4,598 | 7,232 | 372 |
| 16 | . 063 | 1.05 | 55.44 | 6,000 | 9,598 | 292 |
| 17 | . 054 | . 77 | 40.76 | 8,182 | 12,860 | 222 |
| 18 | . 047 | . 58 | 30.89 | 10,862 | 16,620 | 169 |
| 19 | . 041 | 45 | 23.49 | 14,000 | 22,300 | 124 |
| 20 | . 035 | 32 | 17.10 | 19,687 | 30,960 | 96 |
| 21 | . 032 | 27 | 14.30 | 23,333 | 37,310 | 72 |
| $\underline{2}$ | . 028 | 21 | 10.92 | 30,000 | 45,840 | 54 |
| 23 | . 025 | 17 | 8.71 |  | 56,330 | ...... |
| 24 | . 023 | . 14 | 7.39 |  | 70,870 | ...... |

## SOFT COPPER WIRE.

| Code $\ldots \ldots \ldots \ldots .$. | Fenzalimp | Fenzamuk | Fenzarico | Fenziale |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Numbers........ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
| Per pound....... | $\$ 0.28$ | .28 | .28 | .28 |
| Code $\ldots \ldots \ldots \ldots .$. | Fenziren | Feobacco | Feodasti | Feoditer |
| Numbers........ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| Per pound....... | $\$ 0.28$ | .28 | .28 | .28 |




Nos. 5 to 13 put up in 25 -pound coils. Nos. 14 to 32 put up in 5 -pound coils.

## HIGH BRASS WIRE.

|  | 5-Pound Coils. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code $\qquad$ Numbers | Feolistic 4 | $\begin{gathered} \text { Feolippe } \\ \mathbf{5} \end{gathered}$ | $\begin{gathered} \text { Feolood } \\ 6 \end{gathered}$ | $\begin{gathered} \text { Feomeator } \\ 7 \end{gathered}$ | $\begin{gathered} \text { Feomeister } \\ \mathbf{8} \end{gathered}$ | $\begin{gathered} \text { Feopases } \\ \mathbf{9} \end{gathered}$ | $\begin{gathered} \text { Feopimus } \\ 10 \end{gathered}$ | Feopitum 11 |
| Per pound. | \$0.23 | 23 | 23 | . 23 | . 23 | . 23 | . 23 | . $231 / 2$ |
| Code .... |  |  |  | Feosisto | Feositis | Feotado | Feotandi | Feoten |
| Numbers |  |  |  | 12 | $13$ | 14 | 15 | $16$ |
| Per pound.. |  |  |  | \$0.231/2 | . $231 / 2$ | . $231 / 2$ | . $231 / 2$ | . $231 / 2$ |

## SPRING BRASS WIRE.

|  | 5-pound Coils. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code....... <br> Numbers | $\begin{aligned} & \text { Fepaturı } \\ & \mathbf{3} \end{aligned}$ | Fepcalib 4 | $\begin{aligned} & \text { Feplini } \\ & \mathbf{5} \end{aligned}$ | Feracari 6 | Ferachico 7 | $\begin{gathered} \text { Feraline } \\ 8 \end{gathered}$ | $\begin{gathered} \text { e Ferbarca } \\ \mathbf{9} \end{gathered}$ | Ferbaren 10 | Ferbatage 11 |
| Per pound | \$0.25 | 25 | . 25 | 25 | . 25 | 25 | 25 | 25 | . $25^{1 / 2}$ |
| Code...... <br> Numbers |  |  |  |  |  |  | Ferbelebt 18 | Ferbillas 15 | Ferblant 16 |
| Per pound |  |  |  |  |  |  | \$0.251/2 | $251 / 2$ | $251 / 2$ |

Brass and copper wire numbered according to Brown and Sharpe's gauge.

## †SEAMLESS BRASS TUBINC.



FOR PUMP CYLINDERS, ETC.

| Code | Ferbogia | Ferbooni | Fercassi | Ferchen | Ferchung | Ferdance | Гerdiste | Ferd |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inside diameter, inches | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| Stub's gauge, numbers. | 14 | 16 | 18 | 20 | 14 | 16 | 18 | 20 |
| Weight per foot, lbs | 2.80 | 2.20 | 1.67 | 1.20 | 3.76 | 2.96 | 2.24 | $1.6{ }^{\prime \prime}$ |
| Per pound. | \$.... | $\ldots$ |  |  | ..... | $\ldots$ | ..... |  |

In lengths of 12 and 18 feet.
Cut any desired length to order. Add for cutting lengths per pound, $\$ .05$.
$\dagger$ Carried in San Francisco only.

## SEAMLESS BRASS TUBING.

BRASS AND NICKEL.PLATED.

| Code | Ferdiva | Ferdouant | Ferdules | Ferdumas | Ferdump | Ferdunil |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Outside diameter, inches | 3/4 | 1 | $\dagger 11 / 8$ | $\dagger 13 / 8$ | †13/4 | $\dagger 2$ |
| Stub's gauge, numbers.. | 25 | $241 / 2$ | 22 | ...... | ...... | ...... |
| Weight per foot, lbs.. | 17 | . 24 | . 40 |  |  |  |
| Covers Standard Iron Pipe, inch. | 3/8 | 1/2 | $3 / 4$ | 1 | 11/4 | $11 / 2$ |
| Per foot | \$..... | ..... | $\ldots$ | $\ldots$ | $\ldots$ |  |

In lengths of 6 feet.

## BRAZED BRASS TUBING.

| Code | Ferepuno | Ferfando | Ferfetar | Fergaben |
| :---: | :---: | :---: | :---: | :---: |
| Outside diameter, inches | 11/4 | $13 / 8$ | $11 / 2$ | $11 / 2$ |
| B. \& S. gauge, numbers. | 22 | 22 | 22 | 20 |
| Weight per foot, lbs.. | . 36 | . 395 | . 43 | . 54 |
| Per foot | \$..... |  |  |  |

In lengths of 6 feet.
Add for nickel-plating.

## BRAZED BRASS TUBING. <br> NICKEL-PLATED. ANNEALED. FOR BASIN SUPPLIES.



In lengths of 6 feet.

## SEAMLESS BRASS PIPE.

STANDARD IRON PIPE SIZE. NOT THREADED. LIGHT ANNEALED FOR BENDING


In lengths of 6 feet.
Add for cutting and threading. Add for nickel-plating.

## SEAMLESS BRASS PIPE.

STANDARD IRON PIPE SIZE. NOT THREADED. SMOOTH AND BRIGHT.

| Code | Fergalacte | Fergapt | Fergapen | Fergeln | Fergessi | Fergich | Fergimus |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inches | $3 / 8$ | 1/2 | 3/4 | $\dagger 1$ | $\dagger 11 / 4$ | +1 $1 / 2$ | †2 |
| Weight per foot, lbs | . 62 | . 90 | 1.25 | 1.70 | 2.50 | 3.00 | 4.00 |
| Outside diameter, inches | . 675 | . 840 | 1.05 | 1.315 | 1.66 | 1.90 | 2.375 |
| Inside " " | 15/32 | 5/8 | $27 / 32$ | 13/32 | $11 / 3 / 2$ | 119/32 | 21/16 |
| Per pound. | \$..... | ..... | ...... | ...... | ...... | ...... |  |

In lengths of 12 feet. Cut any desired length to order. Add for cutting and threading. Add for polishing and nickel-plating.
$\dagger$ Carried in San Francisco only.

## †HIGH BRASS IN ROLLS.



18 Inches Wide.

| Code $\ldots \ldots \ldots .$. | Fermate | Fermerai | Fermest | Fermique | Fermita | Fermitigo | Fermond | Fermust | Fernadet | Fernardo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers $\ldots \ldots \ldots$ | $\mathbf{1 4}$ | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 2}$ | $\mathbf{2 4}$ | $\mathbf{2 6}$ | $\mathbf{2 8}$ | $\mathbf{3 0}$ | $\mathbf{3 2}$ |
| Per pound $\ldots \ldots$ | $\$ \ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$. | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ |

Full rolls, 50 to 70 pounds.

## SIGN BRASS.

$\ddagger$ NO. 16 BROWN AND SHARPE'S GAUGE.

†HIGH BRASS IN SHEETS.


Roll and Sheet Brass numbered according to Brown and Sharpe's gauge.
$\ddagger$ Carried in Los Angeles only. $\quad$ Carried in San Francisco only.

## BRAZIERS' SHEET COPPER.



SOFT ROLLED.
$30 \times 60$ Inches.

| Code | Fersant | Fersebit | Fersemus | Fersida | Fersj. .ck |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Weight per sheet, lbs | $\dagger 7 \frac{3}{4}$ to 9 | $91 / 4$ to 10 | 11 to 12 | 121/2 | 14 |
| Stubs' gauge, numbers | 29 | 27 | 26 | 24 | 23 |
| Weight per square foot | 10 | 12 | 14 | 16 | 18 |

Per pound.
\$.
$\dagger$ We also carry 30 x 60 sheets weighing $15,16,17,18,19,20,21,22,25,28,30,35,40$ pounds each.

## GENUINE PLANISHED SHEET COPPER.

## COLD ROLLED. TINNED ON ONE SIDE. <br> $\dagger 14 \times 18$ Inches.

| Code | Fersonne | Fersorum | Ferstal |
| :---: | :---: | :---: | :---: |
| Weight per square foot, ounces.. | 12 | 14 | 16 |
| Stubs' gauge, numbers........ | 27 | 26 | 24 |
| Per pound.. | \$..... | ...... | $\ldots$ |
| Tinning per sheet. | \$..... | ...... | $\ldots$ |
| $14 \times 56$ Inches. |  |  |  |
| Code | Ferstampt | Ferstate | Fertech |
| Weight per square foot, ounces.. | $\ddagger 12$ | 14 | 16 |
| Stubs' gauge, numbers............... | 27 | 26 | 24 |
| Per pound........... | \$..... | ...... | ...... |
| Tinning per sheet..... | \$...... | $\ldots$ |  |

† $14 \times 60$ Inches.

| Cod | Fertical | Fertiga |
| :---: | :---: | :---: |
| Weight per square foot, ounces. | 14 | 16 |
| Stubs' gauge, numbers............. | 26 | 24 |
| Per pound. | \$..... |  |
| Tinning per sheet. | \$..... |  |

Sheet copper numbered according to Stubs' gauge.

## GENUINE PLANISHED SHEET COPPER.

COLD ROLLED. TINNED ON ONE SIDE.
$30 \times 60$ Inches.

| Code | Fertorial | Fertrin | Ferviator | Fesadore | Fesakengi | Fesaphora | Fescamus | Fescando | Fescate | Fesegeur |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weight per sheet, libs..... | 10 | 11 | $\dagger 12$ | 13 | † 14 | +15 | $\dagger 16$ | $\dagger 18$ | $\dagger 20$ | + $2 \underline{2}$ |
| Stubs' gauge, numbers ... | 27 | 26 | 25 | 24 | 23 | 22 | $221 / 2$ | 21 | $211 / 2$ | 20 |
| Wt. per square foot, ozs.. | 12 | 14 | 15 | 16 | 18 | 20 | 22 | 24 | 25 | 28 |
| Per pound........... | \$..... | $\ldots$ | .... | ...... | ...... | ...... | ...... | ...... | ...... |  |
| Tinning per sheet... | \$...... | ..... | $\ldots$. | ..... | ... | $\ldots$ | $\ldots$ | $\ldots$ | ...... |  |

[^36]
## TINNED SHEET COPPER.


$30 \times 60$ inches.

| Code.. | Fesivago | Feskie | Feskluit | Feskung | Feslomand |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Weight per sheet, lbs...................... | $\dagger 8$ to 9 | $91 / 4$ to $103 / 4$ | 11 to 12 | $121 / 2$ | 13 to 14 |
| Weight per square foot, ounces........ | 11 | +/ $12{ }^{10 /+}$ | 14 | 16 | 18 |
| Per pound.. | \$..... | ...... | ...... | ...... | ...... |
| Tinning per sheet.......................... | \$..... | ... | ... | .. | ...... |

$\dagger$ We also carry $30 \times 60$-inch sheets weighing $15,16,18$ and 20 pounds each.

## CORNICE COPPER.

COLD ROLLED. PATENT LEVELED.

$\dagger 24 \times 96$ inches.


Per pound. $\qquad$
$\dagger 30 \times 60$ inches
Fessehide Fessione Fesslag Felsslent

| 10 | 16 | 18 | +20 |
| :--- | :--- | :--- | :--- |
| 29 | 24 | 23 | $211 / 2$ |

$30 \times 72$ inches
Fessmuge Fesstiva Fesstola Fesstube
$12 \quad 14 \quad \dagger 16 \quad 15$
$\begin{array}{llll}27 & 26 & 24 & \text { 2: }\end{array}$

Sheet Copper numbered according to Stubs' gauge.
$\dagger$ Carried in San Francisco only.

## †TOBIN BRONZE RODS.

REGULAR ROUND BARS. SUITABLE FOR PUMP RODS, STAY RODS, BOLTS, ETC. HARD, DUCTILE, NON.CORROSIVE, STRONG, TOUGH AND UNIFORM.



Length of bars 15 to $i 7$ feet.
We can supply any of the above sizes from stock.

## WE ARE PACIFIC CQAST AGENTS FOR TOBIN BRONZE

Which we can furnish from factory in the following forms: Pump Piston Rods, Flat, Round, Square and Hexagon Bars, Plates, Sheets and Billets.

Tobin Bronze is a combination of copper with other metals. Can be forged either hot or cold. Has a specific gravity of 8.379 as against 8.93 for copper. The weight of a cubic inch of Tobin Bronze and Copper is respectively . 3021 and .3176 of a pound, a difference of .0155 of a pound in favor of Tobin Bronze.

It is suitable for:
Pump Piston Rods and Valve Stems, Railway Car Boxes,
Pump Plungers, Valve Faces, Block Pins, Center Boards,
Gun Carriage Tracks and Slides,
Condenser Tubes Plates and Stay Rods,
Forged Gunpowder Tools, Launch Shafting,
Cross-head Gibs and Slides,
Disc Valves for Pumps, Powder Mill Plates, Propeller Bolts,

Deck Bolts and Ship Fastenings,
Linings for Pumps,
Tannic Acid Extractor Shells,
Hull Plates for Yachts. etc.
Commutator Bars and Drop
Forgings of Every Description,
Bolts, Nuts, Screws and Rivets,
Turnbuckles and Liners,
Fin Keels and Rudders,
Perforated Screen Plates for Coal Mines and Paper Mills.

Testimonials from some of the largest manufacturers in the United States give Tobin Bronze the highest recommendations, and when once used by a manufacturer has taken the place of all other metals for high grade work.

## INSTRUCTIONS FOR ORDERING AND USING TOBIN BRONZE.

In ordering sheets, rods, etc., of Tobin Bronze, please mention for what purpose the metal is to be used, temper required, and the strain subjected to when in practical use. This information is necessary for guidance in the manufacture and treatment of the metal.

In forging, flanging and upsetting Tobin Bronze, great care should be taken to heat it gradually and work it only at a cherry red heat. It is particularly specified not to work or strike the metal at a black heat. Always allow forgings to cool gradually.

To forge a bolt head or flange a plate, sufficient of the metal should be heated to insure soundness and uniformity after finishing.

When required for Piston Rods or yacht shafting so specify, as we supply them finished and perfectly straight cut to required lengths.

Particulars and prices of plates, rods, etc., furnished on application.
$\dagger$ Carried in San Francisco only.

Weight of Copper and Brass Wire and Plates by American Gauge.

| Number of Gauge. | Thickness, Decimals of Inch. | Weight of Wire per 1000 Lineal Feet. |  | Weight of Plates per Square Foot. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Copper, 1bs. | Brass, lbs. | Copper, lbs. | Brass, lbs. |
| 0 | . 32486 | 319.45 | 301.82 | 14.716 | 13.904 |
| 1 | 28930 | 253.34 | 239.35 | 13.105 | 12.382 |
| 2 | 25763 | 200.91 | 189.82 | 11.671 | 11.027 |
| 3 | 22942 | 159.32 | 150.52 | 10.393 | 9.8192 |
| $\pm$ | . 20431 | 126.35 | 119.38 | 9.25 .52 | 8.7445 |
| 5 | 18194 | 100.20 | 94.666 | 8.2419 | 7.787 |
| 6 | 16202 | 79.462 | 75.075 | 7.3395 | 6.9345 |
| 7 | . 14428 | 63.013 | 59.545 | 6.5359 | 6.1752 |
| 8 | . 12849 | 49.976 | 47.219 | 5.8206 | 5. 4994 |
| 9 | . 11443 | 39.636 | 37.437 | 5.1837 | 4.8976 |
| 10 | . 10189 | 31.426 | 29.687 | 4.6156 | 4.3609 |
| 11 | . 090742 | 24.924 | 23.549 | 4.1106 | 3.8838 |
| 12 | . 080808 | 19.766 | 18.676 | 3.6606 | 3.4586 |
| 13 | . 071961 | 15.674 | 14.809 | 3.2598 | 3.0799 |
| 14 | . 064084 | 12.435 | 11.746 | 2.9030 | 2.7428 |
| 15 | . 057068 | 9.859 | 9.315 | 2.5852 | 2.4425 |
| 16 | . 050820 | 7.819 | 7.587 | 2.3021 | 2.1751 |
| 17 | . 045257 | 6.199 | 5.857 | 2.0501 | 1.937 |
| 18 | . 040303 | 4.916 | 4.645 | 1.8257 | 1.725 |
| 19 | . 035890 | 3.899 | 3.684 | 1.6258 | 1.5361 |
| 20 | . 031961 | 3.094 | 2.920 | 1.4478 | 1.3679 |
| 21 | . 028462 | 2.452 | 2.317 | 1.2893 | 1.2182 |
| 22 | . 025347 | 1.945 | 1.838 | 1.1482 | 1.0849 |
| 23 | . 022571 | 1.542 | 1.457 | 1.0225 | . 96604 |
| 24 | . 020100 | 1.223 | 1.155 | . 91053 | 86028 |
| 25 | . 017900 | . 9699 | . 9163 | . 81087 | . 76612 |
| 26 | . 01594 | . 7692 | . 7267 | . 72208 | . 68223 |
| 27 | . 014195 | . 6099 | . 5763 | . 64303 | . 60755 |
| 28 | . 012641 | . 4837 | . 4570 | . 57264 | . 54103 |
| 29 | . 011257 | . 3835 | . 3624 | . 50994 | . 48180 |
| 30 | . 010025 | . 3002 | .2874 | . 45413 | . 42907 |
| 31 | . 008928 | . 2413 | . 2280 | . 40444 | . 38212 |
| 32 | .007950 | . 1913 | . 1808 | . 36014 | . 34026 |

Official Table Adopted by the Association of Copper Manufacturers of the United States.
Rolled copper has specific gravity of 8.93 . One cubic foot weighs $558^{125 / 1000} \mathrm{lbs}$. One square foot one inch thick weighs $46^{51 / 100}$ lbs.

| Ounces per Square Foot. | $14 \times 48$ Sheets. Weight in pounds. | 30 x 60 Sheets. Weight in pounds | $48 \times 72$ Sheets. Weight in pounds. | Thickness in Decimal Parts of One Inch. | Stubs' Gauge, Nearest Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 1.16 | 3.12 | 6 | . 00537 | 35 |
| 6 | 1.75 | 4.68 | 9 | . 00806 | 33 |
| 8 | 2.33 | 6.25 | 12 | . 0107 | 31 |
| 10 | 2.91 | 7.81 | 15 | . 0134 | 29 |
| 12 | 3.50 | 9.37 | 18 | . 0161 | 27 |
| 14 | 4.08 | 10.93 | 21 | . 0188 | 26 |
| 16 | 4.66 | 12.50 | 24 | . 0215 | $\because 4$ |
| 18 | 5.25 | 14.06 | 27 | . 0242 | 23 |
| 20 | 5.83 | 15.62 | 30 | . 0269 | 20 |
| 24 | 7. | 18.75 | 36 | . 0322 | 21 |
| 32 | 9.33 | 25. | 48 | . 0430 | 19 |
| 40 | 11.66 | 31.25 | 60 | . 0538 | 18 |
| 48 | 14. | 37.50 | 72 | 0645 | 16 |
| 56 | 16.33 | 43.75 | 84 | 0754 | 15 |
| 64 | 18.66 | 50. | 96 | 0860 | 14 |
| 70 |  | 55. | 105 | 095 | 13 |
| 81 |  | 63. | 122 | . 109 | 12 |
| 89 |  | 70. | 134 | . 120 | 11 |
| 100 |  | 78. | 150 | . 134 | 10 |
| 110 |  | 86. | 16.5 | . 148 | 9 |
| 123 |  | 96. | 184 | . 165 | 8 |
| 134 |  | 105. | 201 | . 180 | 7 |
| 1.11 |  | 118. | 227 | . 203 | 6 |

Table Showing Difference Between Wire Gauges in Decimal Parts of an Inch.

| Number of Wire Gauge. | American Steel and <br> Wire Co. or <br> Washburu \& Moen. | Birmingham or Stubs' | Americall or Brown \& Sharpe's. | English Legal Standard. | Old English or London. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | . 307 | . 340 | . 32495 | . 324 | . 340 |
| 1 | . 283 | . 300 | . 28930 | .3 | 300 |
| 2 | . 263 | . 284 | - . 25763 | . 276 | 284 |
| 3 | . 24 | . 259 | . 22942 | . 252 | 259 |
| 4 | 225 | . 238 | $20+31$ | 2:3 | 2:38 |
| \% | . 207 | .220 | 18194 | 212 | $20^{2}$ |
| 6 | 192 | . 203 | .1620\% | . 192 | $20: 3$ |
| 7 | 177 | 180 | . 14428 | . 176 | 180 |
| 5 | 162 | 165 | . 12849 | . 16 | 165 |
| 9 | 148 | 148 | . 11443 | . 144 | 148 |
| 10 | . 135 | . 134 | . 10189 | 128 | 134 |
| 11 | . 120 | . 120 | . 09074 | 116 | 120 |
| 12 | . 105 | . 109 | . 08080 | 104 | 109 |
| 13 | . 092 | . 095 | . 07196 | . 092 | 095 |
| 14 | . 080 | .08:3 | . 06408 | . 08 | 08:3 |
| 15 | .072 | .072 | . 05706 | .072 | . 072 |
| 16 | .06:3 | . 065 | .0508: | $.064$ | . 065 |
| 17 | . 054 | . 058 | . 04525 | $.056$ | . 058 |
| 18 | . 047 | . 049 | . 04030 | . 048 | . 049 |
| 19 | . 041 | . 042 | . 035589 | . 04 | . 040 |
| 20 | . 035 | .0:35 | $03196$ | $.036$ | . 035 |
| 21 | . 032 | .032 | $028+6$ | .032 | .0315 |
| 29 | . 028 | . 028 | $.025: 3+7$ | $.028$ | $.0295$ |
| 23 | . 025 | . 025 | . 022571 | . 024 | $.027$ |
| 24 | . 023 | . $0 \geq 2$ | $.0201$ | . 0202 | $.025$ |
| 25 | . 020 | . 020 | $.0179$ | $.02$ | $.023$ |
| 26 | . 018 | $018$ | $01594$ | $.018$ | $0205$ |
| 97 | . 017 | $.016$ | $01+19{ }^{-}$ | .0164 | $01875$ |
| 28 | . 016 | . 014 | $.0126+1$ | $.0148$ | . 0165 |
| 29 | $.015$ | $013$ | $.011257$ | $.0136$ | . 0155 |
| 30 | $.014$ | $2012$ | $.010025$ | $.0124$ | $01375$ |
| 31 | $.0135$ | $010$ | $.008928$ | $.0116$ | $.01225$ |
| 32 | $.0130$ | $009$ | $.00795$ | $.0108$ | $01125$ |
| 33 | 0110 | . 008 | $00708$ | . 01 | $.01025$ |

## JUNIATA GALVANIZED SHEETS.

BEST BLOOM.



| Numbers $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$. | $\dagger \mathbf{1 2}$ | $\mathbf{1 4}$ | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 2}$ | $\mathbf{2 4}$ | $\mathbf{2 6}$ | $\mathbf{2 7}$ | $\mathbf{2 8}$ | $\mathbf{3 0}$ |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| List, per pound $\ldots \ldots \ldots \ldots \ldots .$. | $\$ 0.12$ | .12 | .12 | .13 | .13 | .14 | .14 | .15 | .16 | .17 | .21 |
| Weight per square foot, lbs.. 4.531 | 3.281 | 2.656 | 2.156 | 1.656 | 1.406 | 1.156 | .9062 | .8437 | .7812 | .6562 |  | Iron 36 inches wide, No. 20 and Lighter, one cent higher than above.

Table showing our stock sizes with code words, weights in pounds of bundles, and number of sheets in one bundle.

| Gauges. | +12 |  |  | 14 |  |  | 16 |  |  | 18 |  |  | 20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size of Sheet. | Code Word. |  |  | Code Word. |  |  | Code Word. |  |  | Code Word. |  |  | Code Word. |  | $\begin{aligned} & 4 \\ & 0 \\ & 0 \end{aligned}$ |
| $\dagger$ 24x 72 | Festemus... | 3 | 163 | Festness. | 4 | 157 | Fetandre. | 5 | 159 | Feteless. | 6 | 155 | Fetifice |  | 159 |
| $\dagger 24 \times 84$ | Festering... | 2 | 127 | Fetacage.... | 3 | 138 | Fetardo | 4 | 149 | Fetelia | 5 | 151 | Fetified. | 7 | 162 |
| 24x 96 | Festeval.... | 2 | 145 | Fetacest..... | 3 | 157 | Fetarsite ... | 4 | 170 | Fetening ... | 4 | 138 | Fetirte | 6 | 159 |
| +30x 72 |  |  |  | Fetacons ... | 3 | 148 | Fetarvat.... | 4 | 159 | Feteraste ... | 5 | 162 | Fetivoler ... | 6 | 149 |
| †30x 84 | Festique | 2 | 159 | Fetadion ... | 3 | 172 | Fetaumer... | 3 | 139 | Feteratio ... | 4 | 151 | Fetmar. | 5 | 145 |
| 30x 96 | Festoir ... | 2 | 181 | Fetagito.... | 2 | 131 | Fetavaro.... | 3 | 159 | Feterous ... | 4 | 172 | Fetolius. | 5 | 166 |
| $\dagger 30 \times 108$ |  |  |  |  |  |  |  |  |  |  |  |  | Fetomake.. | 4 | 150 |
| $\dagger 30 \times 120$ |  |  |  |  |  |  | Fetazella | 2 | 133 | Feteschot... | 3 | 162 | Fetonic...... | 4 | 166 |
| +36x 72 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\dagger 36 \mathrm{x} 84$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 36x 96 |  |  |  | Fetalogia | 2 | 157 | Feteciss. | 2 | 127 | Fetibono ... | 3 | 155 | Fetral... .... | 4 | 159 |
| $\dagger 36 \times 120$ |  |  |  | Fetampsy .. |  | 197 | Fetegma |  | 159 | Feticos. | 2 | 129 | Fetrim. | 3 | 149 |
| Gauges. | 22 |  |  | 24 |  |  | 26 |  |  | 27 |  |  | 28 |  |  |
| Size of Sheet. | Code Word. |  |  | Code Word. |  |  | Code Word. |  |  | Code Word. |  |  | Code Word. |  | 析 |
| $\dagger 24 \mathrm{x}-72$ | Fetrock ..... | 9 | 152 | Feuchon.... | 11 | 153 | Feumilch... | 14 | 152 | Feusides.... | 15 | 152 | Fevalang... | 16 | 150 |
| $\dagger 24 \times 84$ | Fetspan.. | 8 | 158 | Feudant..... | 9 | 146 | Feumoes ... | 12 | 152 | Feutiche... | 13 | 154 | Fevalling... | 14 | 153 |
| 24x 96 | Fetstun...... | 7 | 157 | Feudist...... | 8 | 148 | Feumoire... | 10 | 145 | Feutimos.. | 11 | 148 | Fevandi..... | 12 | 150 |
| +30x 72 | Fettelar..... | 7 | 148 | Feugeld .... | 9 | 156 | Feuregel ... | 11 | 149 | Feutore ..... | 12 | 152 | Fevegraf ... | 13 | 152 |
| +30x 84 | Fettelhaft .. | 6 | 148 | Feuglant.... | 7 | 142 | Feuroso..... | 10 | 159 | Feutude.... | 10 | 148 | Feveito..... | 11 | 150 |
| 30x 96 | Fetterave... | 5 | 141 | Feugliar.... | 7 | 162 | Feursord.... | 8 | 145 | Feuzien .. | 9 | 152 | Fevelure ... | 10 | 156 |
| +30x108 | Fettonica... | 5 | 158 | Feuklad..... | 6 | 153 | Feurston ... | 8 | 168 |  |  |  |  |  |  |
| $+30 \times 120$ | Fetung ...... | 4 | 141 | Feukol....... | 5 | 145 | Feurtia...... | 7 | 159 | Feuzolt... | 7 | 148 |  |  |  |
| +36x 72 |  |  |  | Feukrup.... |  | 146 | Feusermo . |  |  |  |  |  |  |  |  |
| †36x 84 |  |  |  | Feukster ... |  | 146 |  |  |  |  |  |  |  |  |  |
| $36 \times 96$ | Fetulare..... | 5 | 169 | Feulsmeid. |  | 166 | Feusias...... |  |  | Feuzug... | 8 | 162 |  |  |  |
| $36 \times 120$ | Feturio...... | 4 | 169 | Feulswerk. |  |  |  |  |  |  |  |  |  |  |  |

We also have No. 30 gauge in the following sizes: $24 \times 84,24 \times 96,30 \times 96$.
Code words are for Gauge and Size only, and do not cover quantities.
Code words are for Gauge and Size only, and do not cover quantities.
$\dagger$ Carried in San Francisco only.

## BLACK SOFT STEEL SHEETS.

ONE PASS. COLD ROLLED. BOX ANNEALED.



| Numbers............ | $\mathbf{1 4}$ | $\mathbf{1 6}$ | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{2 8}$ | $\mathbf{2 4}$ | $\mathbf{2 6}$ | $\mathbf{2 7}$ | 28 | $\dagger \mathbf{3 0}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per pound.......... | $\$ \ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$. | $\ldots \ldots$ | $\ldots \ldots$. | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ |

Table showing our stock sizes with code words, weights in pounds of bundles, and number of sheets in one bundle.

| Gauges. | 14 |  | 16 |  | 18 |  |  | 20 |  |  | 22 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size of Sheet. | Code Word. |  | Code Word. |  | Code Word |  |  | Code Word. |  |  | Code Word. |  | $\begin{aligned} & 0.0 \\ & 0 \\ & 0.0 \\ & 30 \\ & 30 \end{aligned}$ |
| $+24 \times 82$ | Fevendolo. | 4146 | Fevolken... | 5144 | Fewdilf...... | 6 |  | Fewgiamo. | 8 | 149 | Fewrap. | 9 | 48 |
| +24x 84 | Feverello... | 4175 | Fevorens... | 5175 | Fewdracht. | 6 | 168 | Fewgruss... | 8 | 168 | Fewrays... |  | 157 |
| 24 x 96 | Fevergeil... | 3150 | Fevorismo. | 4160 | Fewgaan ... | 5 | 160 | Fewkennig | 7 | 168 | Fewreck.... | 8 | 160 |
| $24 \times 101$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26x 96 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| +30x 72 | Fevernel.... | $314]$ | Fewcane ... | 4148 | Fewgarid... | 5 | 151 | Fewkocht .. | 7 | 164 | Fewrot... | 7 | 47 |
| +30x 84 | Fevestria... | 3164 | Fewcaras... | 4175 | Fewgeest... | 5 | 175 | Fewkrug.... | 6 | 157 | Feycite.... | 8 | 175 |
| 30x 96 | Fevitura.... | 3188 | Fewdax..... | 3150 | Fewgerum. | 4 | 160 | Fewlage.... | 5 | 180 | Feyclim..... | 6 | 150 |
| Gauges. | 24 |  | 26 |  | 27 |  |  | 28 |  |  | $\dagger 30$ |  |  |
| Size of Sheet. | Code <br> ll ord. |  | Code Word. |  | Code Word. |  |  | Code Word. |  |  | Code Word. |  | $\begin{aligned} & \text { og d } \\ & \text { gex } \\ & \text { dex } \end{aligned}$ |
| $\dagger 24 x-72$ | Feycorant.. | 12147 | Fezetsel .... | 16146 | Fiabolos.... | 18 | 157 | Fiadrom.... | 20 | 159 |  |  |  |
| †24x 84 | Fezadig..... | 11 154 | Fezoard..... | 14147 | Fiacheto.... | 15 | 144 | Fiadraph... | 17 | 149 | Fiamella .. | 20 | 143 |
| 24 x 96 | Fezaner..... | 10160 | Fezong...... | 12144 |  |  |  | Fialepse..... | 15 |  |  |  |  |
| 24x101 | Fezantes ... | 9152 | Fezote....... | 12151 | Fiaconie... | 13 | 150 | Fialima ..... |  |  |  |  |  |
| +26x 96 |  |  |  |  |  |  |  |  |  |  | Fiamotus... | 18 | 153 |
| +30x 72 | Fezenheid.. | 10156 | Fezudas..... | 13151 | Fiacope ..... | 14 | 147 | Fiallus ...... | 16 |  |  |  |  |
| +30x 84 | Fezestan ... | 9157 | Fiabella ..... | 11144 | Fiademus... | 13 | 156 | Fialogas.... | 14 |  |  |  |  |
| 30x 96 | Fezetha ..... | 8160 | Fiablura.... | 10150 | Fiadoco..... | 11 | 151 | Fiamante... | 17 |  |  |  |  |

Code words are for Gauge and Size only, and do not cover quantities.

## BLACK COLDEN GATE SHEET IRON.

```
FREE FROM SMUT. PATENT LEVELED. UNIFORM COLOR.
    24xl01 Inches.
```

| Code......... Numbers.. |  | Fibastir | Fibolim 27 | $\begin{aligned} & \text { Fibosco } \\ & \mathbf{2 8} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Per pound |  | \$..... |  |  |
|  | WELLSVILLE POLISHED STEEL. |  |  |  |
|  |  |  | + |  |
|  | $\dagger 28 \times 101$ Inches. |  |  |  |
| Code .... | $\begin{aligned} & \text {... Fibrocato } \\ & \ldots . . \\ & \hline 24 \end{aligned}$ | $\begin{aligned} & \text { Fibroch1 } \\ & \mathbf{2 5} \end{aligned}$ | $\begin{array}{r} \text { Fibrutt } \\ \mathbf{2 6} \end{array}$ | $\begin{gathered} \text { Ficarcho } \\ \mathbf{2 7} \end{gathered}$ |
| Per pound.. | .... \$...... | $\ldots$ | ...... |  |

In bundles. Average weight of bundles 155 pounds.
$24 \times 101$ Inches.

| Code | Ficarcirt | Ficarcop | Firarcum | Ficardant | Ficaretta |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | †24 | †25 | $\dagger 26$ | 27 | +28 |
| Per pound | \$...... | ..... | .... | $\ldots$ | ...... |

In bundles. Average weight of bundles, 150 pounds.

## WOODS' PATENT PLANISHED SHEET IRON.


"A" Quality. 28x60 Inches.

$\dagger$ "A" Quality. 28x72 Inches.


Per pound ....................................................................................................................
†"B" Quality. 28x60 Inches.

| Code | Fichloir | Fichoden | Fichorum | Ficibolus | Ficibuler |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | 24 | 25 | 26 | 27 | 28 |
| Weight per sheet, lbs | 11. | 10. | 9. | 8.5 | 8. |
| Per pound | \$..... | $\ldots$ | $\ldots$ | ..... |  |

Put up in metal cases or packs, with wood backs. Takes same rate of freight as Black Iron. Average weight of cases or packs, 290 pounds.

Average Number of Sheets in a Pack.


## CORRUGATED ROOFING.

BLACK STEEL. PAINTED RED.



6 to 10 feet long, 26 inches wide.

Twenty-six inches wide after corrugating. Two and one-half inch corrugations.
Allowing for lap of one corrugation it lays twenty-four inches to the weather.


Table Showing Number of Sheets in a Square, and Code Words.

| Gauges. |  | $\dagger 24$ | $\dagger 26$ | $\dagger 27$ | $\ddagger 28$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Length of Sheets. Inches. | Number of Sheets to a Square. | Code Word. | Code Word. | Code Word. | Code Word. |
| 72 | 7.692 | Ficitorem............ | Ficraniot ... | Fidamure...... | Fidelphor. |
| 84 | 6.593 | Ficlapod.............. | Ficranur... | Fidascal .. | Fideltar |
| 96 | 5.769 | Ficlinate .......... | Ficrotus | Fidatise. | Fidendos |
| 108 | 5.128 | Ficomast ........ | Ficrudat | Fidattic. | Fidicer |
| 120 | 4.616 | Ficotomi .... | Fidame | Fideaux | Fidimel. |

Table Showing the Number of Square Feet Necessary to Cover a Square of 100 Square Feet of Surface.
The table is based on using ninety-six inch sheets. When longer or shorter sheets are used the number of square feet will vary slightly.

Allowing for side lap of one corrugation:

| Allowing for end lap | 1 inch | 2 inches | 3 inches | 4 inches | 5 inches | 6 inches |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Square feet............. | 110 | 111 | 112 | 113 | 114 | 115 |
| $\ddagger$ Carried in Los <br> $\dagger$ Carried in San |  |  |  |  |  |  |

## CORRUGATED ROOFING.

## GALVANIZED STEEL.



6 to 10 feet long, 27 inches wide.
Twenty-seven inches wide after corrugating. Two and five-eighths inch corrugations. Allowing for lap of one corrugation, iron lays twenty-four inches to the weather.

| Numbers | † 22 | +24 | 26 | $\dagger 27$ | + 28 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Weight per square, lbs. | 152 | 124 | 98 | 91 | 85 |
| Per pound | \$...... | . | .. .. | ...... |  |

Table Showing Number of Sheets in a Square, and Code Words.

| Gauges. |  | †22 | † 24 | 26 | +27 | † $\mathbf{2 8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Length of Sheets. Inches. | Number of Sheets to a Square. | Code Word. | Code Word. | Code Word. | Code Word. | Code Word. |
| 72 | 7.692 | Fidintros ..... | Fiducer ...... | Fiefturn..... | Fienerlo ..... | Fierbach. |
| 84 | 6.593 | Fidiplas .......... | Fiductis ....... | Fiefwal!..... | Fienstag...... | Fierecto |
| 96 | 5.769 | Fidituro .......... | Fiduncal...... | Fielento ... | Fiepert ........ | Fierenet. |
| 108 | 5.128 4.616 | Fidonum......... | Fiduxer........ | Fiemite ..... | Fiepsel ........ | Fierenler. |
| 120 | 4.616 |  | Fiefstall..... | Fienend..... | Fierbaar ..... |  |
|  |  |  |  | . M. <br> RID | $\begin{aligned} & \text { S. P } \\ & \text { CAP } \end{aligned}$ | IN |
|  |  |  | Code............................... Fieretical Fiergard |  |  |  |
|  |  |  | Size, inches............................ $71 / 2 \times 71 / 2 \mathrm{~T}^{1 / 2} \times 71 / 2$ |  |  |  |
|  |  |  | Gauge of iron ....................... 24 26 26 |  |  |  |
|  |  |  | Weight per foot, lbs................. 1.25 1.10 |  |  |  |
|  |  |  | Per foot............................... \$0.28 . 22 |  |  |  |

$\dagger$ H. M. \& S. PLAIN RIDGE CAP.
GALVANIZED.

| Code | Fiergraph | Fiermen | Fieront | Fiersort | Fierville | Fiervorm | Fiesante | Fieserhal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size, inches | 4x4 | $6 \times 6$ | $71 / 2 \times 71 / 2$ | $12 \times 12$ | $4 \times 4$ | $6 \times 6$ | $71 / 2 \times 71 / 2$ | $12 \times 12$ |
| Gauge of iron | 24 | 24 | 24 | 24 | 26 | 26 | 26 | 26 |
| Weight per foot, lbs. | . 67 | 1.00 | 1.25 | 2.00 | . 60 | 88 | 1.10 | 1.75 |
| Per foot. | \$0.18 | . 26 | . 30 | . 48 | . 16 | 22 | . 28 | 44 |

Made in sections six feet long.

## $\dagger$ H. M. \& S. FANCY RIDCE CAP.




Made in sections six feet long.
Any size, style or weight ridge cap made to order.
$\dagger$ Carried in San Francisco only.

## U. S. STANDARD GAUGE.

For Sheet and Plate Iron and Steel.
Approved, March 3, 1893.
(Copy)
[Public-No. 137.]
An act establishing a standard gauge for sheet and plate iron and steel.
Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of securing uniformity the following is established as the only standard gauge for sheet and plate iron and steel in the United States of America, namely :

| Number of Gauge. | Approximate Thickness in Fractions of an Inch. | Approximate Thickness in Decimal Parts of an Inch. | Weight per Square Foot in Ounces Avoirdupois. | Weight per Square Foot in Pounds Aroirdupois. |
| :---: | :---: | :---: | :---: | :---: |
| 0000000 | 1/2 | . 5 | 320 | 20.00 |
| 000000 | 15/32 | . 46875 | 300 | 18.75 |
| 00000 | 732 | . 4375 | 280 | 17.50 |
| 0000 | 13/32 | . 40625 | 260 | 16.25 |
| 000 | 3/8 | . 375 | 240 | 15. |
| 00 | $11 / 32$ | . 34375 | 220 | 13.75 |
| 0 | 5/32 | . 3125 | 200 | 12.50 |
| 1 | 9\%32 | . 28125 | 180 | 11.25 |
| 2 | $17 / 64$ | . 265625 | 170 | 10.625 |
| 3 | $1 / 4$ | . 25 | 160 | 10. |
| 4 | $15 / 64$ | . 234375 | 150 | 9.375 |
| 5 | 713 | . 21875 | 140 | 8.75 |
| 6 | ${ }^{13} 64$ | . 203125 | 130 | 8.125 |
| 7 | 3/16 | . 1875 | 120 | 7.5 |
| 8 | $11 / 64$ | . 171875 | 110 | 6.875 |
| 9 | 5/32 | . 15625 | 100 | 6.25 |
| 10 | 9364 | . 140625 | 90 | 5.625 |
| 11 | $1 / 8$ | . 125 | 80 |  |
| 12 | 7/64 | . 109375 | 70 | 4.375 |
| 13 |  | . 09375 | 60 | 3.75 |
| 14 | 5/64 | . 078125 | 50 | 3.125 |
| 15 | 91128 | . 0703125 | 45 | 2.8125 |
| 16 | $1 / 16$ | . 0625 | 40 | 2.5 |
| 17 | 9160 | . 05625 | 36 | 2.25 |
| 18 | 120 | . 05 | 32 | 2. |
| 19 | 7/160 | . 04375 | 28 | 1.75 |
| 20 | 3/80 | . 0375 | 24 | 1.50 |
| 21 | 11/320 | . 034375 | 22 | 1.375 |
| 22 | 1/32 | . 03125 | 20 | 1.25 |
| 23 | 9320 | . 028125 | 18 | 1.125 |
| 24 | 1/40 | . 025 | 16 |  |
| 25 | 7320 | . 021875 | 14 | . 875 |
| 26 | 3/160 | . 01875 | 12 | . 75 |
| 27 | 11/640 | . 0171875 | 11 | . 6875 |
| 28 | 1/64 | . 015625 | 10 | . 625 |
| 29 | 9640 | . 0140625 | 9 | . 5625 |
| 30 | 1/80 | . 0125 | 8 | . 5 |
| 31 | 7640 | . 0109375 | 7 | . 4375 |
| 32 | $13 / 1280$ | . 01015625 | $61 / 2$ | . 40625 |
| 33 | 3/320 | . 009375 | 6 | . 375 |
| 34 | $11 / 1280$ | . 00859375 | $51 / 2$ | . 34375 |
| 35 | 9/640 | . 0078125 | 5 | . 3125 |
| 36 | 9/1280 | . 00703125 | $41 / 2$ | . 28125 |
| 37 38 | 172560 | . 006640625 | $41 / 4$ | . 265625 |
| 38 | 1/160 | . 00625 | 4 | . 25 |

And on and after July first, eighteen hundred and ninety-three, the same and no other shall be used in determining duties and taxes levied by the United States of America on sheet and plate iron and steel. But this act shall not be construed to increase duties upon any articles which may be imported.

Sec. 2. That the Secretary of the Treasury is authorized and required to prepare suitable standards in accordance herewith.

Sec. 3. That in the practical use and application of the standard gauge hereby established a variation of two and one-half per cent either way may be allowed.
†TIN NAIL HEADS.

$\dagger$ Carried in San Francisco only.


## LEAD WASHERS.



One pound will lay three squares. Five pounds in a box. One-hundred pounds in a case.

## ROOFING NAILS.



| Code | Fiesqack | Fietare | Fietator | Fieteride |
| :---: | :---: | :---: | :---: | :---: |
| Size, inche | 7/8x14 | 7/8×13 | $1 \times 12$ | $2 \times 10$ |
| Style. | Tinned | Bright | Bright | Bright |
| Number to a pound. | 600 | 415 | 384 | 124 |
| Per pound | \$0.14 | . 12 | . 11 | . 11 |
| Code | F | ietesafo | Fietetico | Fievenn |
| Size, inches |  | $1 \times 12$ | 2x10 | $11 / 4$ |
| Style.. |  | v. Barbed | Galv. Barbed | Blk. Cut |
| Number to a pound. |  | 411 | 115 | 464 |
| Per pound. |  | \$0.15 | . 13 | 12 |

One hundred pounds in a keg.
$\dagger$ Carried in San Francisco only.

## ESCUTCHEON PINS.

BRASS.
No. 12.


No. 14.
Code........ Fiezmara Fiezmesin Figamon Figastric Figenesi

| Inch........ | $1 / 2$ | $5 / 8$ | $3 / 4$ | $7 / 8$ | $\mathbf{1}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Per pound | $\$ 0.77$ | .76 | .75 | .74 | .73 |

No. 16.


## TINNED OVAL HEAD TACKS.

| Code. | Figenism | Figentiar | Figerable |
| :---: | :---: | :---: | :---: |
| Ounces | 8 | 10 | 12 |
| Length, inch. | 9/16 | 1016 | 11/19 |
| Per dozen papers.. | \$1.10 | 1.30 | 1.50 |
| Code. | Figeranto | Figerendum | Figerido |
| Ounces | 14 | 16 | 18 |
| Length, inch.............. | 12/16 | 13/6 | 14/16 |
| Per dozen papers. | \$1.80 | 2.00 | 2.20 |
| One dozen pap <br> $\dagger$ Carried in San F | pers in a rancisco | package. <br> only. |  |


$\dagger$ H. M. \& S. GALVANIZED GUTTERING OR EAVES TROUGH.

PLAIN BEADED. IRON No. 26 GAUGE.



Code.
Figestirl Figestive Figestoram Figestur

| Size, inches... | 4 | 5 | 6 | 8 |
| :---: | :---: | :---: | :---: | :---: |
| Per foot | \$0.171/2 | 21 | . 23 | ...... |
| Weight per 100 feet, lbs | 105 | 128 | 157 | 203 |
| Shipping measurement per 100 feet, cubic feet | 5 | $52 / 3$ | $61 / 2$ | $91 / 3$ |

Made in six-foot lengths. Any size, style or weight made to order.

## $\dagger$ H. M. \& S. GALVANIZED CUTTERING OR EAVES TROUGH.

```
BEADED WITH FLANGE. IRON No. 26 GAUGE.
```



| Code. | Figgably | Figitabul | Figitalic | Figitanos |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches. | 4 | 5 | 6 | 8 |
| Per foot | \$...... | ...... | ...... |  |
| Weight per 100 feet, lbs | 135 | 165 | 195 | 204 |
| Shipping measurement per 100 feet, cubic feet ......................... | 75\% | 10\% 6 | 12 | 145/6 | Made in six-foot lengths. Any size, style or weight made to order.

## IMPERIAL GUTTER HANCERS.

WITH RODS. FOR FIVE-EIGHTHS BEAD.
Code $\qquad$ Figitanute Figitape Figitapil Figitate Size, inches ....... 4 4 $1 / 2$ - 6
Per gross ......... $\$ 7.10 \quad 7.30 \quad 7.60 \quad 8.50$

Weight per gross, lbs $37 \quad 38 \quad 42 \quad 47$
Tongs to apply Hangers, each.................. \$0.75

[^37]


## WIRE GUTTER HANGERS.

FOR FIVE-EIGHTHS BEAD

This hanger is made of best galvanized steel wire; can be quickly and easily adjusted to the gutter, and is the only wire hanger forming a complete brace as well as hanger.

| Code ......... | Figitateal | Figitateam | Figitateas | Figitateap |
| :---: | :---: | :---: | :---: | :---: |
| Size, inches | $\mathbf{4}$ | $\mathbf{4} 1 / 2$ | $\mathbf{5}$ | $\mathbf{6}$ |
| Per gross ... | $\$ 2.25$ | 2.50 | 2.70 | 3.15 |
| Weight per |  |  |  |  |
| gross, lbs. | 23 | 25 | 26 | $331 / 2$ | $\begin{array}{lllll}\text { gross, lbs. } & 23 & 25 & 26 & 331 / 2\end{array}$

One gross in a package.
$\dagger$ Carried in San Francisco only.

## EAVE TROUGH MITERS. <br> inside corner. galvanized iron. PLAIN BEADED.



| Code............. Figitatear | Figitatebo | Figitated | Figitateke |  |
| :--- | :---: | :---: | :---: | :---: |
| Numbers $\ldots \ldots \ldots$. | $\mathbf{4 - I}$ | $\mathbf{5 - I}$ | $\mathbf{6 - I}$ | $\mathbf{8 - I}$ |
| Inches........... | 4 | 5 | 6 | 8 |
| Each............ | $\$ \ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots \ldots$ |
| Wgt. each, lbs.. | 1 | $1 / 6$ | $1 / 4$ | $\ldots .$. |

Any size, style or weight made to order.

## EAVE TROUGH MITERS.

outside corner. galvanized iron. PLAIN BEADED.

Code. Figitatell Figitatep Figitaters Figitatic
Numbe $\begin{array}{llll}\mathbf{4 - 0} & \mathbf{5 . 0} & \mathbf{6 - 0} & \mathbf{8 - 0}\end{array}$
Inches $\qquad$
Each. $\qquad$
 Wgt. each, lbs.. $11 \quad 1 \frac{1}{6} \quad 11 / 4 \quad \ldots .$. ...... Any size, style or weight made to order.

## EAVE TROUGH OUTLETS.

## GALVANIZED IRON.

Code $\qquad$ Figitatide Figitatif Figitatige Figitatiko Inches $\qquad$ $\begin{array}{lll}4 & 5 & 6\end{array}$ - 8 Each. $\qquad$ \$...... Wgt. each, lbs.. Any size, style or weight made to order.

## EAVE TROUGH ENDS WITH OUTLETS.

GALVANIZED IRON.


Code
Figitatils Figitatom Figitatoni Figitatuse
Inches  $\begin{array}{llll}4 & 5 & 6 & 8\end{array}$ Outlets, inches. Each. Wgt. each, lbs..

Any size, style or weight made to order.
H. M. \& S. GALVANIZED CONDUCTOR PIPE.

STRAIGHT SEAM. SOLDERED.


| Code | Figitavan | Figitello | Figitifer | Figitino | Figitorum |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inches | 2 | 3 | 4 | J | 6 |
| Gauge of iron.. | 28 | 27 | 27 | 27 | 27 |
| Per foot | \$0.10 | . $101 / 2$ | . 14 | 17 | 20 |
| Weight per 100 feet, lbs. | 52 | 74 | 99 | 121 | 150 |
| Shipping measurements per 100 feet, cubic feet. | 75/6 | 13 | 201/12 | 293/4 | 40 |

Made in seven and one-half foot lengths. Any size or weight made to order. $\dagger$ Carried in San Francisco only.

## GALVANIZED STRAIGHT SEAMED CONDUCTOR PIPE.

PLAIN ROUND LOCK SEAMED No. 28 IRON.

For Leader or Conductor Spouts, Ventilating, Heating Blast, Hot Air and Blower Pipe. Each length is a singie perfect piece.


GALVANIZED SPIRAL CONDUCTOR PIPE.



The 1 -inch is straight seamed. The $1,11 / 2,2,3$ and 4 -inch made in 6 -foot lengths.
The 5 and 6 -inch made in 10 -foot lengths.

## GALVANIZED ROUND CORRUGATED EXPANDING CONDUCTOR.




## †CORRUGATED EXPANDING CONDUCTOR ELBOWS.

GALVANIZED. ROUND.

| Code............ | Filabido | Filabiter | Filabunto | Filabunvo | Filahunzo |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Inches $\ldots . . . . .$. | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
| Each $\ldots \ldots \ldots \ldots \ldots$ | $\$ 0.25$ | .30 | .40 | .45 | .50 |
| Weight per doz., lbs. | $21 / 2$ | $51 / 2$ | 8 | 11 | 15 |

## †CONDUCTOREPIPE HOOKS.

galvanized. steel.

| Code................. | Filacando | Filacassi | Filacerad | Filacfast | Filacgut |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Inches $\ldots \ldots \ldots . .$. | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{3}$ | $\mathbf{6}$ |
| Shank, inches..... | 3 | $31 / 2$ | $\mathbf{4}$ | $41 / 2$ | 6 |
| Each .............. | $\$ 0.10$ | .12 | .15 | .20 | .25 |
| Weight per 100, lks.... | 12 | 24 | 41 | 61 | 78 |

## H. M. \& S. CONDUCTOR HEADS.



| Code. | Filacion | Filamass | Filaminat | Filancian |
| :---: | :---: | :---: | :---: | :---: |
| Outlet, inches........ | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Top, inches.......... | $6 \times 6$ | $6 \times 6$ | $61 / 2 \times 61 / 2$ | $7 \times 7$ |
| Height, inches..... | $61 / 2$ | $61 / 2$ | - | 7 |
| Per dozen | \$5. 25 | 5.25 | 5.50 | 6.35 |
| Wt. per doz., lbs... | 14 | 15 | 18 | 20 |
| Code | Filapidas | Filapkast | Filappol | Filapsion |
| Outlet, inches. | 4 | j) | 6 | 7 |
| Top, inches Height, inches.. | $\begin{gathered} 81 / 2 \times 81 / 2 \\ 8 \end{gathered}$ | $\begin{gathered} 91 / 2 \times 91 / 2 \\ 9 \end{gathered}$ | $\begin{gathered} 11 \times 11 \\ 10_{1 / 2} \end{gathered}$ | $\begin{aligned} & 111 / 2 \times 11_{1 / 2}^{11 / 2} \end{aligned}$ |
| Per dozen.. | \$8.00 | 12.00 | 16.00 | 18.00 |
| Weight per doz., lbs.... | 26 | 37 | 48 | 54 |
| $\dagger$ Carried in San | Francisco | only. |  |  |

## WIRE CONDUCTOR STRAINERS.

## gaLVANIZED.

|  |  | Filapsura | Filargime |
| :---: | :---: | :---: | :---: |
| Code Inches. |  | 2 | 3 |
| Per dozen |  | 1.50 | 2.00 |
| Wt. per doz., lbs. |  | $11 / 2$ | 2 |
| Cude <br> Inches | Filargirt 4 | Filataca 5 | $\begin{aligned} & \text { Filatamis } \\ & \mathbf{6} \end{aligned}$ |
| Per dozen.............. | \$3.00 | 5.00 | 6.00 |
| Wt. per doz., lbs........... | 4 | 6 | 8 |



One gross in a barrel.

## STANDARD SPEAKING TUBES.

## LOCK SEAM.



SPEAKING TUBE ELBOWS.
TIN.




SPEAKING TUBE WHISTLES.
EXTRA STRONG. NICKEL.PLATED.

| Code | Filatore |
| :---: | :---: |
| Number | 157 |
| Style | Without Indicator |
| Per dozen | \$13.00 |
| Weight p | 2 |

One dozen in a box.

## SPEAKING TUBE WHISTLES.

PORCELAIN MOUTH PIECE. JAPANNED BODY.

Code
Number
Stymb. $\qquad$ Filatorum 158

Filaudam
With Indicator Without Indicator
Per dozen.
$\$ 4.00$
4.00

Weight per dozen, lbs
2

One dozen in a box.

## SPEAKING TUBE WHISTLES.

NICKEL.PLATED. NO SPRINGS.


One dozen in a box.
$\dagger$ SPEAKING TUBE WHISTLES.

```
NICKEL.PLATED. WITH LOOSE FLANGES. BEVELED PATTERN.
```

The best whistle for flexible tubes.

| Code ................................................ | Filectorit |
| :---: | :---: |
| Number.. | 152 |
| Style | With Indicator |
| Per dozen... | \$12.00 |
| Weight per dozen, lbs........................... | $1{ }^{1 / 4}$ |

One dozen in a box.

## SPEAKING TUBE WHISTLES.




## CHARCOAL BRICHT AND TERNE PLATES.

We carry a large and complete stock of all standard sizes and weights of Bright and Terne Plates, also many odd sizes.

Our stock is made from domestic Black Steel Plates, manufactured especially for us. They are more satisfactory than imported Plates, being tougher and more malleable. They are thoroughly and evenly coated.

## † PLACER CHARCOAL TIN.

BRIGHT-GOOD GRADE.


| Code. | Trade Term. | Size, Inches. | Sheets in a Box. | Gross Weight, Lbs. | Wire Gauge. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finigra................. ..... | ........... |  | $\ldots$ | $\ldots$ | ...... | \$. |
| Finion ....................... |  |  | $\ldots .$. | $\ldots$ |  |  |
| Finkelkor ............ ...... | 100-1b. | $20 \times 28$ | 112 | 210 | 31 | ...... |
| Finobry ..................... | IC | $12 \times 12$ | 225 | 117 | 30 | ... |
| Finoccam................... | IC | $14 \times 20$ | 112 | 113 | 30 | ...... |
| Finoccand ........ .......... | IC | $20 \times 28$ | 112 | 225 | 30 | ...... |
| Finoccasse ................. | IXL | $14 \times 20$ | 112 | 135 | 29 | ...... |
| Finoccate.. ................. | IXL | $20 \times 28$ | 112 | 268 | 29 | ....... |
| Finocelar ................ ... | IX | $12 \times 12$ | 225 | 146 | 28 |  |
| Finochari...... ............ | IX | $14 \times 20$ | 112 | 142 | 28 |  |
| Finocorus .................. | 1X | 20x28 | 112 | 284 | $261 / 2$ |  |
| Finocrate.................. | IXX | $14 \times 20$ | 112 | 162 | 28 | $\ldots$ |

## BELMONT CHARCOAL TIN.

BRIGHT-EXTRA GRADE. TISSUE PAPER PACKED.



| Code. | Trade Term. | Size, Inches. | Sheets in $i$ Box. | Gross Weight. Lbs. | Wire Gange. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finogeta | +IC | $12 \times 12$ | 225 | 117 | 30 | \$..... |
| Finoloch | $\dagger$ IC | $14 \times 14$ | 225 | 160 | 30 |  |
| Finomach. | IC | $14 \times 20$ | 112 | 113 | 30 | ...... |
| Finomene | IC | $20 \times 28$ | 112 | 225 | 30 | ...... |
| Finomorph | $\dagger$ IX | $12 \times 12$ | 225 | 145 | 28 | ...... |
| Finornas ....... | $\dagger$ IX | $14 \times 14$ | 225 | 200 | 28 | $\ldots .$. |
| Finosauri. | IX | 14x20 | 112 | 142 | 28 | $\ldots .$. |
| Finosceba. | $\dagger$ IX | $16 \times 16$ | 225 | 260 | 28 | $\ldots .$. |
| Finoscend. | IX | $20 \times 28$ | 112 | 285 | 28 | $\ldots .$. |
| Finoscim | $\dagger$ IXX | $12 \times 12$ | 225 | 168 | $261 / 2$ | $\ldots .$. |
| Finother.... | $\dagger$ IXX | $14 \times 14$ | 225 | 228 | $261 / 2$ | ...... |
| Finoverum. | IXY | $14 \times 20$ | 112 | 163 | $261 / 2$ | ...... |
| Finovittle. | +IXX | $16 \times 16$ | $22 \%$ | 283 | $261 / 2$ | $\ldots .$. |
| Finoxoid .. | IXX | $20 \times 28$ | 112 | 322 | $261 / 2$ | ...... |
| Fintelamo | $\dagger$ IXXX | $14 \times 20$ | 112 | 183 | $251 / 2$ | . |
| Fintelase.. | IXXX | $20 \times 28$ | 112 | 362 | $251 / 2$ | ...... |
| Fintenlos... | $\dagger$ IXXXX | $14 \times 20$ | 112 | 204 | 25 | ...... |
| Fintenman. | IXXXX | $20 \times 28$ | 112 | 404 | 25 |  |

[^38]
## TIN PLATES.

## †STERLING CHARCOAL TIN.



BRIGHT. EXTRA HEAVY COATED.
For Dairy Work. Tissue Paper Packed.

| Code. | Trade Term. | Size, Inches. | Sheets in a Box. | Gross Weight, Lbs. | Wire Gauge. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fintensat | IXX | 20x2 | 112 | 322 | $26^{1 / 2}$ | \$. |
| Fintentop | IXXX | $20 \times 28$ | 112 | 362 | $25^{1 / 2}$ |  |
| Fintenzeg | IXXXX | $20 \times 28$ | 112 | 404 | 25 |  |

All of above carried in half boxes of 56 sheets only:


BESSEMER COKE TIN PLATES.


REGULAR SIZES.

| Code. | Trade Term. | Size, Inches. | Sheets in a Box. | Gross Weight, Lbs. | Wire Gauge. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fiogmita ..... .............. | $\dagger 80.1 \mathrm{~b}$. | $20 \times 28$ | 112 | 170 | 33 | \$..... |
| Fiognatus .................. | $90-1 \mathrm{~b}$. | $14 \times 20$ | 112 | 96 | 32 | ...... |
| Fiomphal................... | 90.16. | $20 \times 28$ | 112 | 190 | 32 | ...... |
| Fiopater .................... | 100-1b. | $14 \times 20$ | 112 | 106 | 31 | ...... |
| Fiophane | 100-1b. | 20x28 | 112 | 210 | 31 | ...... |
| Fioptrico ........... | IC | $14 \times 20$ | 112 | 113 | 30 | $\ldots .$. |
| Fioptrism................... | IC | 20x28 | 112 | 224 | 30 | ...... |
| Fiorchit ..................... | †IX | $14 \times 20$ | 112 | 142 | 28 | ...... |
| Fioretique ........ .......... | IX | $20 \times 28$ | 112 | 283 | 28 | $\ldots .$. |

## BESSEMER COKE TIN PLATES.

## SQUARE AND ODD SIZES.

| Code. | Trade Term. | Size, Inches. | Sheets in Box. | Gross Weight, Lbs. | Wire Gauge. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fiorthar... | +90-1b. | $12 \times 12$ | 225 | 99 | 32 | \$...... |
| Fiosapul..................... | +90-1b. | $10 \times 17$ | 225 | 109 | 31 |  |
| Fioscodi...................... | $\dagger$ 100-1b. | $12 \times 12$ | 225 | 109 | 31 |  |
| Fioscorem................. | +100-1). | 10x17 | 225 | 129 | 31 |  |
| Fioskuro ................. | $\dagger$ 100-1b. | $10 \times 20$ | 225 | 150 | 31 |  |
| Fipanaro.. | +100-1b. | 10x21 | 225 | 158 | 31 |  |
| Fipanate.. | $\dagger 100-1 \mathrm{l}$. | 11x22 | 225 | 192 | 31 |  |
| Fipanavam .............. | $\dagger$ 100-1b. | $12 \times 17$ | 225 | 154 | 31 |  |
| Fipartenzo .................... | $\dagger 100$-1b. | $12 \times 18$ | 225 | 174 | 31 |  |
| Fipaschel ..................... | $\dagger$ 100-1b. | 14x14 | 225 | 148 | 31 |  |
| Fipelamo..................... | $\dagger$ 100-1b. | 14x22 | 112 | 117 | 31 |  |
| Fipelass1 ..................... | +100-1b. | 15x15 | 225 | 170 | 31 |  |
| Fipelera ............................. | +100-lb. | $15 \times 22$ | 112 | 125 | 31 |  |
| Fipetal.............................. | $\dagger 100-1 \mathrm{~b}$. | 16x16 | 225 | 194 | 31 |  |
| Fipingemo................... | 100-1b. | 17x17 | 225 | 218 | 31 |  |

$11 \times 22,12 \times 18,17 \times 17$ carried in half boxes of 112 sheets.
The terms "Coke" and "Charcoal" originally denoted the grade of iron from which the plates were made but as all American plates are made of Bessemer steel, these terms have lost their original meaning and now signify only the different thicknesses of coating which the plates receive, the Coke plates having the lightest coatings and the Charcoal the heaviest.

## CHARCOAL ROOFING PLATES. MENLO-OLD PROCESS.



Very best quality. Made by old palm oil process. Squared. Forty pounds of coating for a box of $20 \times 28$

| Code. | Trade Term. | Size, Inches. | Sheets in Box. | Gross Weight, Lbs. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fipinturo. ..... | IC | $14 \times 20$ | 112 | 125 | \$...... |
| Fiplander........ | IC | $20 \times 28$ | 112 | 250 | ...... |
| Fiplarena....... | $\dagger$ I X | $14 \times 20$ | 112 | 152 | ....... |
| Fiplasic ....... | $\dagger$ I X | $20 \times 28$ | 112 | 304 | ...... |

ROYAL-OLD STYLE-RE-DIPPED.
HEAVY COATED. SQUARED.
ROYAL
Each sheet stamped: OLD STYLE
H. M. \& S.

| Code. | Trade Term. | Size, Inches. | Sheets in Box. | Gross Weight, Lbs. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fiplazon..... | $\dagger$ I | $14 \times 20$ | 112 | 125 | \$...... |
| Fiplectro.. | 1 C | 20x28 | 112 | 250 | ...... |

$\dagger$ Carried in San Francisco only.

## CHARCOAL ROOFING PLATES. $\dagger$ NON-RUSTING.

RE-SQUARED AND STAMPED.


## BERKELEY.

GOOD GRADE.


| Code. | Trade Term. | Size, Inches. | Sheets in a Box. | Gross Weight, Lbs. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fiplinth ... | 100-1b. | 14x20 | 112 | 106 | \$..... |
| Fiplochil....... | 100-1b. | 20x28 | 112 | 212 |  |

## POMONA.

GOOD GRADE.

| Code. | Trade Term. | Size, Inches. | Sheets in a Box. | Gross Weight, Lbs. | Per Box. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fiploder .................... | $\dagger$ IC | $14 \times 20$ | 112 | 113 | \$...... |
| Fiplogeni................... | IC | 20x28 | 112 | 225 | ....... |
| Fiploidi ..................... | $\dagger$ IX | 14x20 | 112 | 142 | ...... |
| Fiplomaro. ................. | +IX | $20 \times 28$ | 112 | 285 | $\ldots$ |

## SHEET ZINC.


$36 \times 84$ INCHES.

| Code. | Number. | Weight per Sheet, Lbs | Weight of Casks in Stock, Lbs. | Per Lb. | Code. | Number. | Weight per Sheet, Lbs. | Weight of Casks in Stock, Lbs. | PerLb. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fiplomati.. | $\dagger 4$ |  | 600 | \$..... | Firagnand | †10 | 15.75 | $600,300,200,100$ |  |
| Fiplomiter.. | $\dagger$ | ........ | 600 | ...... | Firagnate.. | +11 | 18.90 | 600 |  |
| Firadase.... | +6 |  | 600 | ..... | Firagnera | +12 | 22.05 | 600 |  |
| Firadavan.. | $\dagger 8$ |  | 600 |  | Firamast... | +14 | 28.35 | 600 |  |
| Firadere .... | 8 | 12.60 | 600, 300, 200, 100 |  | Firancher. | +16 | 35.28 | 600 |  |
| Firadican... | 9 | 14.07 | 600, 300, 200, 100 | .... | Firandell .. | +20 | 55.02 | 600 |  |

No. 20 is packed flat, eleven sheets in a case.
Additional charge is made for casks containing less than 600 pounds and for loose sheets. $\dagger$ Carried in San Francisco only.
$48 \times 96$ INCHES.

| Code. | Number. | Weight per Sheet, Lbs. | Weight of Casks in Stock, Lbs. | Per Lb. | Code. | Number. | $\begin{gathered} \text { Weight } \\ \text { per Sheeet, } \\ \text { Lbs. } \end{gathered}$ | Weight of Casks in Stock, Lbs. | Per Lb. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Firazzi.. | $\dagger 7$ | 17 | 600 | \$...... | Firefull..... | 11 | 28 | 600, 250 | \$...... |
| Fircisla..... | S | 19 | 600 | , | Firemost .. | 12 | 32 | 600 |  |
| Firectara ... | 9 | 22 | $600,250,100$ |  | Firempto .. | $\dagger 14$ | 41 | 600 | $\ldots$. |
| Firectiva.... | 10 | 24 | $600,250,100$ |  |  |  |  |  |  |

$48 \times 108$ INCHES.

| Code. | Number. | Weight per Sheet. Lbs. | Weight of Casks in Stock, Lbs. | Per Lb. | Code. | Number. | Weight per Sheet, Lbs. | Weight of Casks in Stock, Lbs. | Per Lb |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fireptise ... | $\dagger 8$ | 21 | 600 | \$...... | Fireximos. | 11 | 31 | 600, 250 | \$... |
| Firepturo... | 9 | 24 | 600, 250 |  | Firezion ... | +12 | 36 | 600, 200 |  |
| Firettory.... | 10 | 27 | 600, 250 |  | Firibitore . | + 14 |  | 600 |  |

Additional charge is made for casks containing less than 600 pounds and for loose sheets.

## TABLE SHOWING COMPARISON OF GAUGES ON SHEET ZINC.

| ILLINOIS ZINC CO'S ZINC GAUGE. |  |  | STUBS' WIRE GAUGE. |  | BROWN \& SHARPE'S GAUGE. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Weight per Square Foot. | Thickness in Decimals. | No. | Thickness in Decimals. | No. | Thickness in Decimals. |
| 5 | 0.37 | . $0101 / 1$ \%od |  |  |  |  |
| 6 | 0.45 | . $012{ }^{100}$ | 29 | . 013 | 29 | . 0112 |
| 7 | 0.52 | . 014 | 28 | . 014 | 28 | . 0126 |
| 8 | 0.60 | . 016 | 27 | . 016 | 27 | . 0141 |
| 9 | 0.67 | . 018 | 26 | . 018 | 26 | . 0159 |
| 10 | 0.75 | . $0201 / 5$ 。 | 25 | . 020 | 25 | . 0179 |
| 11 | 0.90 | . $024{ }^{\text {5 }}$ | 24 | . 022 | 24 | . 0201 |
| 12 | 1.05 | . 028 | 23 | . 025 | 23 | . 0225 |
| 13 | 1.20 | . 032 | 22 | . 028 | 22 | . 0253 |
| 14 | 1.35 | . 036 | 21 | . 032 | 21 | . 0284 |
| 15 | 1.50 | . $0401 / 25$ | 20 | . 035 | 20 | . 0319 |
| 16 | 1.68 | . $045{ }^{\text {25 }}$ | 19 | . 042 | 19 | . 0359 |
| 17 | 1.87 | . 050 | 18 | . 049 | 18 | . 0403 |
| 18 | 2.06 | . 055 | 17 | . 058 | 17 | . 0452 |
| 19 | 2.25 | . 060 1/17 | 16 | . 065 | 16 | . 0508 |
| 20 | 2.62 | . 070 | 15 | . 072 | 15 | . 0570 |
| 21 | 3.00 | . 080 | 14 | . 083 | 14 | . 0640 |
| 22 | 3.37 | . 090 | 13 | . 095 | 13 | . 0719 |
| 23 | 3.75 | . 100 \% $/$ 。 | 12 | . 109 | 12 | . 0808 |
| 24 | 4.70 | . $1255^{1 / 8}$ | 11 | . 120 | 11 | . 0907 |
| 25 | 9.40 | . $2501 / 4$ | 10 | . 134 | 10 9 | . 11114 |
| 26 | 14.00 | . $3753 / 8$ | 9 | . 148 | 9 | . 1114 |

†SLAB ZINC OR SPELTER.
Code Firigest
Per pound ..... \$......
In slabs of about fifty pounds each.


## $\dagger$ U. S. ANTIMONY.

## Code.

 FirumposPer pound. \$......
In slabs of about forty pounds each. 600 pounds in a barrel.


## $\dagger$ BAR LEAD.




## CAULKING LEAD.

Code. Firupper
Per pound. \$......
Five pounds in a pig.

PIG LEAD.


## BAR TIN.

Code ...................... .................................................................................
Per pound.............


One pound bars.

## PIG TIN.

$\qquad$ About fifty pounds per pig.

## TINNERS' SOLDER.

| Code....................... |  | Fisamor | Fisarmol |
| :---: | :---: | :---: | :---: |
| Grade | Extra X | No. 1 | 0. |
| Proportion of lead and tin $1 / 2$ and $1 / 290$ to 10080 to 100 |  |  |  |
| er poun | \$..... |  |  |
| Two | 100 |  |  |



## $\dagger$ WIRE SOLDER.

FOR ELECTRICIANS.

| Code.. | Fisergote | 1 |
| :---: | :---: | :---: |
| Diameter, inch. | 1/8 | 3/16 |
| Per pound. | \$..... | ...... |

From five to fifty pounds in a coil.

## SPELTER SOLDER.

FOR BRAZING.



We can also furnish the above cut any size for Drop Solder.
-


## WIPING SOLDER.



Three lbs. per cake. One hundred lbs. per case.

## ELECTRIC NITRATE SILVER SOLDER.



Cut Shows Full Size.


Can be used by any one for repairing Tin, Granite, Aluminum, Copper, etc., without Rosin or Acid. Directions sent with each bunch.
Code Fistelman
Per bunch.
Weight per box, lbs.
One hundred bunches in a box.


## MENLO ANTI-FRICTION METAL.

STRICTLY HIGH GRADE. SUPERIOR TO THE BEST. FOR LIGHT OR HEAVY BEARINGS.
Code.................................................. Fistenros
Per pound. $\$ \ldots .$.
About five pounds per cake. Fifty-six pounds in a case.

## †MENLO BABBITT METAL.



Code ..Fisteolite

Fistercin Fisthoram Fisticera Grade, numbers... 1 2 $\mathbf{2}$ Per pound. About fifty pounds in a box.

## †CENUINE BABBITT METAL.

[^39]

## $\dagger$ MURIATIC ACID.

| Code. | Fistularem | Fitacione |
| :---: | :---: | :---: |
| Package. | Bottles | Carboys |
| Capacity, gallons | 1/2 | 8 |
| Pounds of acid | 6 | 100 |
| Per pound.. | \$..... |  |
| Shipping weight of carboys about 120 pounds. |  |  |
| COOKED. |  |  |
| Code.. |  | Fitadeller |
| One pint bottles, |  |  |

## ROSIN.

BEST QUALITY.

| Code............. | Fitadore | Fitament | Fitantibo | Fitaredon |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Boxes, | lbs..... | $\mathbf{1 0}$ | $\mathbf{1 5}$ | $\mathbf{2 5}$ | Bbl., lbs., 300 |
| Per pound $\ldots .$. | $\$ \ldots .$. | $\ldots \ldots$. | $\ldots \ldots$. | $\ldots .$. |  |

## †SOLDERING SALTS.

$\qquad$
Per dozen bottles \$......


## CHARCOAL.

## EXTRA QUALITY.

$\qquad$
Code.. Fitatorum

Per sack \$....
About fifty pounds in a sack.
$\dagger$ Carried in San Francisco only.

## $\dagger$ ASBESTOS CORRUGATED PAPER.

## COVERING FOR HOT-AIR FURNACE PIPES AND HEATERS.

This Covering is made by cementing a flat and corrugated piece of Sheathing together, thereby producingDead Air Spaces. Thirty-six inches wide.
Code ..... Fitatorino ..... $1 / 4$
Thickness, inches.
Thickness, inches.
Square feet in a roll ..... 250
Weight per square foot, ounces ..... $41 / 3$
Per square foot ..... $\$ 0.04$

About seventy-five pounds in a roll.

## ASBESTOS PAPER OR SHEATHING.

This is a Fire-Proof Sheathing or Lining for wrapping hot-air furnace pipes, etc. It will not disintegrate with age, is odorless and vermin-proof. Thirty-six inches wide.


About one hundred pounds in a roll.

## $\dagger$ ASBESTOS ROLL MILL BOARD.

Composed of Fibrous Asbestos, taking the place of Asbestos Sheathing where a heavier material is desired. Thirty-six inches wide.

## Code

 Fitatorobe Fitatorock FitatoroedThickness,inches.

| $1 / 32$ | $1 / 16$ | $1 / 8$ |
| :--- | :--- | :--- | :--- |
| 16 | 25 | 65 |

Weight per 100 square feet, lbs
$\$ 0.10 \quad .10$65

Per pound
. 10
About one hundred pounds in a roll.

## † ASBESTOS SHEET MILL BOARD.

Is fire and acid-proof, and is valuable for packing joints in contact with fire and oils. It is also used for Fire Screens, Partitions, Ceilings and Linings for Ranges, Stoves, Grates, Gas Backs, etc. In sheets $40 \times 40$ inches.

| Code ........................... Fitatoroft | Fitatorogo | Fitatorolp | Fitatosab | Fitatosado | Fitatoseem | Fitatosege |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Thickness, inch |  |  | 8 | 3/16 | 1/4 | 1/2 |
| Weight per sheet, lbs..... 2 to $21 / 2$ | $33 / 4$ to $41 / 4$ | $51 / 2$ to 6 | $71 / 2$ to 8 | $111 / 2$ to 12 | $131 / 2$ to $141 / 2$ | 27 to 30 |
| Per pound..................... \$0.10 | 10 | 10 | . 10 | 10 | 10 | 10 |

About four hundred pounds in a case.

## $\dagger$ ASBESTOS WICK PACKING.

This Wick Packing is composed of selected Asbestos Fibre spun into strands (which can be separated) and made into the form of soft, strong "Lamp-wick," which may be wound or packed around small valve stems, pumps, etc. It is acid and fire-proof. Wound in balls.
Code................................................... Fitatosef Fitatosegi Fitatoseht Fitatosell Fitatosick Fitatoship
Diameter, inches

| $1 / 8$ | $1 / 8$ | $1 / 8$ | $1 / 4$ | $1 / 4$ | $1 / 4$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 4$ | $1 / 2$ | 1 | $1 / 4$ | $1 / 2$ | 1 |
| $\$ 0.30$ | .30 | .30 | .30 | .30 | .30 |

One-half pound halls always sent unless otherwise ordered.
State if $1 / 8$ or $1 / 4$ inch is wanted.
$\dagger$ Carried in San Francisco only.

## PORCELA.

FOR CLEANING AND POLISHING PORCELAIN ENAMELED PLUMBING FIXTURES. ALSO KITCHEN UTENSILS AND WARE.

Guaranteed to remove dirt, grease, rust, lime and other stains from porcelain enameled ware without harm to the glazed surface or injury to the hands.

## Code

 GocaboneSize, ounces 8
Per dozen $\$ 2.40$
Weight per dozen, lbs. 6
Weight per case, lbs100

One gross in a case.

## PEERLESS IRON ENAMEL.

JET BLACK. WITH BRISTLE BRUSH.
For general use on Registers, Grates, Fenders, Stovepipes, Coal Hods, Carriage Tops, etc.
Code Goarined
Size of cans, pint. 1/2
Per dozen
$\$ 3.00$
Weight per case, lbs 12
Shipping measurement per case, cubic feet 5/12

## $\dagger$ BLACK VARNISH.

## BEST GRADE ASPHALTUM.

Code
Per gallon
Weight per gallon, lbs.
$\dagger$ Carried in San Francisco only.
mane
MADE EXCLISIVELY
PORCELAIN ENAMELED BATH TUBS AND atyer ENADOTMER PORCELAIN WARE PORCIETA THE PORCELACO New Brishton, Pa
Sow MAvintures


One dozen in a case.


MEYERS PUTZ POMADE CO. Importers and Mantits

Boston, Mass.
U. S. A.


## "PEERLESS" ALUMINUM ENAMEL.

HIGHEST GRADE MADE.

Can be used on any surface. Will give a bright enamel finish with frosted silver effect.


## $\dagger$ WHITE ENAMEL PAINT.

## BEST QUALITY.

Applied to any surface with satisfactory results.
Code Gobalico Gobament Gobarrona
Size of cans
$\qquad$

Per dozen. $\$ 6.00 \quad 10.00$ 19.20

Weight per dozen, lbs. $\qquad$

## † UNIVERSAL METAL PUTZ.

GENUINE RED PASTE POLISH. HELMET AND FLOWING PLUME BRAND.

This paste will not shrink, or lose its polishing or cleaning qualities with age.
Code. Gobaticos Gobillo Gobinate
Size, lbs.

| 1 | $21 / 2$ | 5 |
| :--- | :--- | :--- |

Per pound
$\$ 0.33 \quad .30$
30
1-pound tins packed six dozen in a case.
$\dagger$ MEYERS' PUTZ EXTRACT.

```
A CREAM-COLORED PASTE.
```

EFor cleaning and polishing Gold, Silver, Brass, Copper and all metals.

This cream is made from the highest grade oils, and is positively superior to any known paste polish. It is free from grit, mercury or acid.
Code
Gobitone Gobstuck
Number
416
Size.
$3 \mathrm{oz} . \quad 1 \mathrm{lb}$.
Per dozen.
$\$ 1.30 \quad 6.00$
3 -ounce, one gross in a case; weight, 34 pounds.
1-pound, one-quarter gross in a case; weight, 44 pounds.
$\dagger$ Carried in San Francisco only.


## †MEYERS' PUTZ LIQUID.




## †"SUNSHINE" METAL POLISH.

## LIQUID. HIGH GRADE.

| Cod | Gocardare Gocaroned |  |
| :---: | :---: | :---: |
| Size of cans, pint. | 1/2 | 1 |
| Per dozen | \$2.40 | 4.20 |
| Weight per case, lbs. | 11 | 18 |
| Shipping measurement per case, $\mathrm{cu} . \mathrm{ft}$. | 1/3 | 712 |

One dozen in a case.

## $\dagger$ THREE IN ONE.

## CLEANS AND POLISHES. PREVENTS RUST. LUBRICATES.

For Typewriters, Bicycles, Guns, Sewing Machines, Talking Machines, Razors and Strops.
Code

Per dozen.............................................................. \$1.20 3.00
Weight per box, lbs.
$7 \quad 7$
Shipping weight, per box, cubic feet
1/6
3/6
Small, two dozen in a box.
Large, one dozen in a box.
$\dagger$ Carried in San Francisco only.


## PIPE JOINT PASTE.

## NON.CORROSIVE.

Makes absolutely Air-Tight Pipe Joints, and will resist the action of Water, Heat, Cold, Acids, etc.

| Code............................ |  |  |  |
| :---: | :---: | :---: | :---: |
| Size of cans, lbs.............. | 5 | 10 | 25 |
| Per pound.................... | \$0.25 | 25 | . 25 |



## IMPERIAL CEMENT.

## THE BEST CEMENT MADE.

For Mending Ornaments - Wood, Leather, China, Glass, Ornamental Dishes, Bric-a-brac, etc.
Can stand a strain of 300 pounds.
Put up in one ounce bottles.
Code $\qquad$
Per dozen.. ...................................................... \$1.20
Weight per dozen, lbs
21/4
One dozen in a box.
A handsome display stand, as shown in cut, is furnished with each first order.

$\qquad$ Gocatema Goccador Goccalepe Goccalint Goccapart
$\qquad$
$\qquad$
$\square$
$\square$Case lots, doz

| $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{0}$ | $\mathbf{6}$ |
| :---: | :---: | :---: | :---: | :---: |
| $1 / 2 \mathrm{pt}$. | 1 pt. | 1 qt. | $1 / 2 \mathrm{gal}$. | 1 gal. |
| $\$ 1.80$ | 3.40 | 6.20 | 12.00 | 20.40 |
| 3 | 2 | 1 | $1 / 2$ | $1 / 2$ |
| $291 / 2$ | 32 | 30 | 30 | 54 |
| $11 / 12$ | 1 | 1 | 1 | $11 / 2$ |

†"BRILLIANTSHINE."
IN PASTE FORM.
WILL POLISH EITHER HOT OR COLD METALS.Co
N
S
P
C
C
S
Sode Gocchidur

| Per dozen $\ldots \ldots \ldots .$. | $\$ 1.00$ | 2.00 | 4.00 | 20.40 |
| :--- | :---: | :---: | :---: | :---: |
| Case lots, doz....... | 12 | 6 | 2 | $1 / 2$ |
| Weight per case, 1 b s | 35 | 40 | 34 | 38 |

"CLIMAX" BAR POLISH.
POWDERED FORM. USED WITH WATERGochabamo
Code
Number ..... 12
Size ..... 1 lb .
Per dozen ..... \$2.40
Case lots, doz. ..... 3
Weight per case, lbs ..... 38
Shipping measurement per case, cubic feet ..... $1^{1 / 4}$


## †COMPETITION RUBBER HOSE.

A CHEAP GRADE. NOT GUARANTEED. SEAMLESS TUBE.

| Code | Kerklite | Kerkpile |
| :---: | :---: | :---: |
| Inch | 1/2 | 3/4 |
| Per foot (3-ply). | \$0.053/4 | . $061 / 2$ |



## †"PIONEER" RUBBER HOSE.

FOR ORDINARY USE. NOT GUARANTEED. SEAMLESS
TUBE.


## $\dagger " E L K "$ RUBBER HOSE.

A GOOD QUALITY. SEAMLESS TUBE.

| Code | Kermisap | Kermistar | arde |
| :---: | :---: | :---: | :---: |
| Inch | 1/2 | $3 / 4$ | 1 |
| Per | \$0.11 | 13 | 18 |



## †"TURTLE" RUBBER HOSE.

WHITE RUBBER COVERED HOSE WITH 5.PLY CANVAS. FOR HEAVY PRESSURE. SEAMLESS TUBE.

| Code. | Kernell | Kernerbas | Kernfahl |
| :---: | :---: | :---: | :---: |
| Inch. | 1/2 | $3 / 4$ | 1 |
| Per foot (5-ply)................... | \$0.12 | . 15 | . 20 |


$\dagger$ Carried in San Francisco only.


## †"INDIAN" RED RUBBER HOSE.



7-PLY. FINE CANVAS.

RED RUBBER COVER. MADE WITH SEAMLESS TUBE. THE BEST HOSE FOR ORCHARD SPRAYING PURPOSES.

| Code $\ldots \ldots \ldots \ldots \ldots \ldots \ldots .$. | Kesorage | Ketchap | Ketelmar |
| :--- | :---: | :---: | :---: | :---: |
| Inch ......................... | $1 / 4$ | $\mathbf{1}$ |  |
| Per foot ( 7 -ply)........ | $\$ 0.17$ | .20 | .27 |

Extra charge for Couplings.
$\dagger$ Carried in San Francisco only.

## †"COLD SEAL" RUBBER HOSE.

```
    A FIRST-CLASS ARTICLE IN EVERY PARTICULAR.
        MADE OF SPECIALLY SELECTED RUBBER
        AND CANVAS. SEAMLESS TUBE.
\begin{tabular}{|c|c|c|}
\hline Code (3-ply). & Keulenar & Keurbend \\
\hline Code (4-ply) & Khordate & Khorsaba \\
\hline Inch. & 1/2 & 3/4 \\
\hline Per foot (3-ply) & \$0.19 & . 23 \\
\hline Per foot (4-ply ) & 23 & . 29 \\
\hline
\end{tabular}
```

| Code (3-ply) | Khaitang | Khandor | Khatuna | $\underset{\text { Kibilmut }}{\text { Kilk }}$ |
| :---: | :---: | :---: | :---: | :---: |
| Code (4-ply) | Khoteau | Kibatarn | Kibbelar | Kibilk |
| Inches | 1 | $11 / 4$ | $11 / 2$ |  |
| Per foot (3-ply) | \$0.30 | . 50 | $.60$ | $80$ |
|  | . 38 | . 62 | . 75 | 1.00 |

## †"PACIFIC" RUBBER HOSE.

WIRE WRAPPED. WIRE WILL NOT UNCOIL WHEN CUT.



Extra charge for Couplings.

## †"NEPTUNE" COTTON HOSE.

RUBBER LINED. EXTRA GRADE. SEAMLESS AND MILDEW-PROOF

| Code | Kidrone | Kiefeke |
| :---: | :---: | :---: |
| Inch | 1/2 | $3 / 4$ |
| Per foot | \$0.10 | . 12 |
|  | ched. |  |

## †"OBELISK" COTTON HOSE.

RUBBER LINED. A SUPERIOR GRADE. MILDEWPROOF. WARRANTED TO STAND A HEAVY PRESSURE.

| Code. | Kiekelhan Kiekendot |
| :---: | :---: |
| Inch. | 1/2 3 /4 |



Per foot .......................................... \$0.13 . 15
In 50 -foot lengths, couplings attached.

## $\dagger$ "EUREKA" COTTON HOSE.

RUBBER LINED. SEAMLESS COTTON AND MILDEWPROOF. WILL STAND OVER 500 POUNDS PRESSURE PER SQUARE INCH.

| Cod | Kielfrost | Kielklot |
| :---: | :---: | :---: |
| Inch | 1/2 | $3 / 4$ |
| Per fo | \$0.16 | . 20 |

In 50 -foot lengths, couplings attached. $\dagger$ Carried in San Francisco only.

## HOSE.

## Approximate Shipping Weights and Measurements of Rubber Hose per Bale.



## Approximate Shipping Weights and Measurements of Cotton Hose per Case.



## MEDIUM WHITE RUBBER TUBING.

| Code | Kielmoss | Kielwald | Kimschot |
| :---: | :---: | :---: | :---: |
| Inside diameter, inch............ | 1/8 | 3/16 | 1/4 |
| Per foot | \$0.011/2 | . $017 / 8$ | . $025 / 8$ |


| Code | Kinadrak | Kinamide | Kinawort |
| :---: | :---: | :---: | :---: |
| Inside diameter, inch | 5/16 | 3/8 | 1/2 |
| Per foot. | \$0.03 | . 04 | . 06 |

About 50 feet in a box.

## HEAVY WHITE RUBBER TUBINC.

| Code |  |  | Kinband$\dagger 3 / 16$ | Kindelbar$\dagger 1 / 4$ | Kinderbet |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inside diameter, inch |  |  |  |  | $\dagger 5 / 16$ |
| Per foot |  |  | \$0.03 | . 04 | . 06 |
| $\begin{gathered} \text { Kinderdop } \\ 3 / 8 \end{gathered}$ | Kinetick $\dagger 1 / 2$ | Kingcraw $\dagger 5 / 8$ | Kingfish $\dagger 3 / 4$ | Kinkett $\dagger 7 / 8$ | Kinkhust $\dagger 1$ |
| \$0.071/2 | . 10 | . $131 / 2$ | . 18 | $221 / 2$ | 27 |

About 50 feet in a box.

+ Carried in San Francisco only.



## $\dagger$ C. L. E. HOSE PIPES.


$3 / 4$ and 1-inch, one dozen in a box. All others loose.

## HOSE PIPE TIPS.

```
POLISHED BRASS.
```




## † HOSE SPRINKLERS.




One dozen in a box.
Fits $3 / 4$ and 1 -inch hose pipes.
$\dagger$ Carried in San Francisco only.


## "MAGIC" SPRAY HOSE PIPES.

## POLISHED BRASS.

Throws either a Straight Stream or a Gradu-
ated Spray.

## "MYSTIC" SPRAY HOSE PIPES.



| Code | Klagesant. |
| :---: | :---: |
| Inch. | 3/4 |
| Length, inches.............................. | $45 / 8$ |
| Per dozen. | \$4.90 |
| Weight per doz., lbs. | $61 / 2$ |
| One dozen in a box. |  |

## $\dagger$ "CRESCENT" SPRAY HOSE PIPES.

POLISHED BRASS.
Throws a Fine or Coarse Spray or a Solid Stream.


## "CEM" SPRAY HOSE PIPES.

POLISHED BRASS.
Throws a Large or Small Solid Stream, or
Code Klaghund
Inch. $3 / 4$
Length, inches $43 / 8$
Per dozen $\$ 5.05$
Weight per doz., lbs
6
One dozen in a box.

## †"BOSS" HOSE PIPES.

## POLISHED BRASS.

Throws a Spray by a Direct Stream, With no Cone or Groove to retard it, and a Round, Solid Stream by simply turning the Cock.

Code

| Klamacht | Klampent |
| :---: | :---: |
| $3 / 4$ | $\mathbf{1}$ |
| $31 / 2$ | $33 / 4$ |

Inch................
Per dozen $\$ 6.30$ 11.25

Weight per doz., lbs. 7


One dozen in a box.

ROUGH NICKEL-PLATED IRON.



Throws Spray or Solid Stream.
Code ..... KlandistInch3/4
Length, inches ..... $51 / 2$
Per dozen. ..... $\$ 3.30$
Weight per doz., lbs ..... 7

## $\dagger$ IMPROVED BLAKE LAWN SPRINKLERS.

IRON. COPPER-PLATED. REVOLVING SPOON.
Code. Klancolan
Inch.
3/4
Size, inches..................................... $41 / 2 x 33 / 4$
Per dozen......................................... \$4.00
Weight per doz., lbs

†"WILGUS" FOUNTAIN LAWN SPRINKLERS.
galvanized iron. has fountain in center OF SPRAY.
Code Klaploop
Inch. ..... 3/4
Per dozen ..... \$6.75
Weight per doz., lbs ..... $141 / 2$One-half dozen in a box.
†" WILGUS" TWIN LAWN SPRINKLERS.
GALVANIZED IRON. THROWS DOUBLE CIRCLE SPRAY.
Code ..... Klaplune
Inch. ..... 3/4
Per dozen. ..... $\$ 5.50$
Weight per doz., lbs. ..... $73 / 4$
One-half dozen in a box.
"BUSY" LAWN SPRINKLERS.
CONSISTS OF A BLAKE SPRINKLER ATTACHED TO A SLED BASE.
Code ..... Klapmast
Inch. ..... 3/4
Base, inches.. ..... $73 / 4 \times 61 / 2$
Per dozen ..... $\$ 9.60$
Weight per doz., lbs ..... 27
One-twelfth dozen in a box.
†"FAN"'LAWN SPRINKLERS.
IRON. NICKEL.PLATED.
Code ..... Klapptick ..... 3/4
Per dozen ..... $\$ 3.00$
Weight per doz., lbs ..... 8One dozen in a box.$\dagger$ Carried in San Francisco only.



## $\dagger$ "ECLIPSE" LAWN SPRINKLERS.

IRON. JAPANNED VERMILION. SPUN COPPER TOP. COVERS 36 FEET IN DIAMETER.
Code.
Inch.
Per dozen ..... $\$ 1.80$
Weight per doz., lbs ..... $31 / 4$

One dozen in a box.

## †"WATER WITCH" LAWN SPRINKLERS.

```
POLISHED BRASS NICKEL.PLATED
```



Cut shows Style No. 3.


| Code....................... | Klapwand | Klarette | Klassick |
| :---: | :---: | :---: | :---: |
| Numbers ................ | $\mathbf{0 1}$ | $\mathbf{1}$ | $\mathbf{3}$ |
| Per dozen ............... | $\$ .50$ | 4.15 | 6.00 |
| Weight per doz., lbs..... | $11 / 2$ | $11 / 2$ | 8 |
| One-half dozen in a box. |  |  |  |

No. 01 has $1 / 8$-inch hole and $3 / 8$-inch iron pipe thread.

No. 1 has $1 / 4$-inch hole and $3 / 8$-inch iron pipe thread.

No. 3 has $1 / 4$-inch hole and $3 / 4$-inch hose thread.

| $\dagger$ "O'SHEA" LAWN |  |  |  |
| :---: | :---: | :---: | :---: |
| SPRINKLERS. |  |  |  |
| TO be used WITH TRIPOD HOSE HOLDER. WILL |  |  |  |
| THROW WATER OVER A SPACE 30 TO |  |  |  |
| 50 FEET IN DIAMETER. |  |  |  |
| Code | Klaterin | Klaudet | Klausnet |
| Numbers | 1 | , | 4 |
| Arms. | 2 | 2 | 4 |
| Arms, inches | 3/8 | $3 / 8$ | 3/8 |
| Inch. | 3/4 | 1 | $3 / 4$ |
| Per dozen | \$15.00 | 18.00 | 21.00 |
| Weight per doz., lbs.... | 15 | $16^{1 / 2}$ | 21 |



## †"TRIPOD" HOSE HOLDER OR STAND.

IRON. PAINTED GREEN.
A simple contrivance for holding the hose. Pass the hose up through the Holder and then screw the sprinkler on the end of the hose.
Code ..... Klaverz
Height, inches .....
Per dozen ..... $\$ 15.00$
Weight per doz., lbs For $3 / 4$ or 1 -inch hose.
†"SUNSHINE" LAWN SPRINKLERS.

BALL-BEARING. STANDARD, BASE AND LEGS JAPANNED RED. ARMS POLISHED BRASS.



## "PLUVIUS" LAWN SPRINKLERS.

## same as the sunshine, ExCEPT IT HAS SLED BASE.

| Code. | Klawhamer |
| :---: | :---: |
| Inch ....................................................... | $3 / 4$ |
| Height, inches | 13 |
| Per dozen ...... .................... ................... | \$13.50 |
| Weight per doz., lbs... | 38 |



## RUBBER HOSE WASHERS.



| Code.......... Klebesto |  | eeds | leerbo | leidest |
| :---: | :---: | :---: | :---: | :---: |
| Inches ......... 3/4 | 1 | $\dagger 11 / 4$ | $\dagger 11 / 2$ | $\dagger 2$ |
| No. washers tolb. 280 | 240 | 50 | 38 |  |
| Per gross..... $\$ 0.36$ | . 63 | 1.62 | 2.52 | 3.96 |
| Per lb. in lots of 5 lb |  |  |  | \$0.48 |
| One | und | a box |  |  |

## hOSE COUPLINGS.



```
ROUGH BRASS. FOR WATER HOSE.
```

| Code | Kleimerk | Kleinbaum | Kleinholt |
| :---: | :---: | :---: | :---: |
| Inch.......................... | 1/2 | 3/4 | 1 |
| Per dozen... | \$2.40 | 2.40 | 4.40 |
| Weight per doz., lbs..... | 3 | $31 / 2$ | 6 |


| Code.. Inches. | Kleinlove $\dagger 1 \mathrm{x} 3 / 4$ | Kleinkrat $11 / 4$ | Klenmand $11 / 2$ | $\begin{aligned} & \text { Kleinsmot } \\ & 2 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$4.40 | 10.00 | 14.00 | 24.00 |
| Weight per doz., lbs. | 61/2 | 11 | 18 | 27 |

For either part of coupling two-thirds above list.
One dozen in a package.


## †"SHERMAN" HOSE CLAMPS.

FINISHED BRASS. CAN BE APPLIED WHEN THE
COUPLING IS IN THE HOSE. FOR
WATER HOSE.

Code $\qquad$ Kleinwast Kleipide Kleistrik Klemhake
Inch

| $1 / 2$ | $3 / 4$ | $3 / 4$ | 1 |
| :---: | :---: | :---: | :---: |
| 3 | 3 | 4 | 3 |
| $1 \times 5 / 16$ | $13 / 16$ | $11 / 4$ | $17 / \pm 6$ |
| $\$ 0.36$ | .36 | .36 | .99 |
| $. .1 / 2$ | $1 / 2$ | $1 / 2$ | $3 / 4$ |

Diam.open, inches
$1^{15 / x / 6}$
$13 /{ }^{16} 6$
Per dozen........... \$0.36
3/4

> Wt. per doz., lbs... $1 / 2$ 1/2 $1 / 2$ $1 / 2$ and $3 / 4$ inch, six dozen in a box. 1 -inch, three dozen in a box.


## $\dagger$ "SHERMAN" DOUBLE HOSE CLAMPS.

The cut shows the use of the Double Clamp in connection with the Sherman mender tube as they are applied in repairing hose. Only one bolt to screw up, and the hose is mended.

| Code. | Klemintena | Klemkall |
| :---: | :---: | :---: |
| For hose, inch.................... | 1/2 | 1/2 |
| Per dozen. | \$0.72 | . 72 |
| Weight per doz., lbs | $3 / 4$ | 1 |

Six dozen in a box.

+ Carried in San Francisco only.


## †SCREW HOSE CLAMPS.

| WROUGHT BRASS. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Code | Klenzer | Klepschur | Klerkam | Kletter |
| Inches | 1/2 | 3/4 | 1 | 11/4 |
| Per dozen | \$1.50 | 1.50 | 2.00 | 2.50 |
| Weight per doz., lbs | 1 | $11 / 2$ | 2 | 2 |
| Code.. | Kleurder Kleurprot Klimate Klimboost |  |  |  |
| Inches | $11 / 2$ | 2 | $21 / 2$ | 3 |
| Per dozen. | \$3.00 | 4.00 | 7.00 | 10.00 |
| Weight per doz.,lbs | 3 | 6 | 6 | ..... |
| Loose. |  |  |  |  |

## "MACIC" HOSE CLAMPS.

BRASS WIRE. STEEL PINS. FOR EITHER 3 OR 4.PLY HOSE.

Code Klimopher Klimstun Klingstat
Inch. $\begin{array}{lll}1 / 2 & 3 / 4 & 1\end{array}$
Per gross................... $\$ 3.00 \quad 3.00 \quad 3.00$
Weight per gross, lbs..... $3 \quad 31 / 4 \quad 31 / 2$
One-half gross in a box.

## "CALDWELL'S" HOSE STRAPS.

BRASS WIRE. FOR FASTENING COUPLINGS IN HOSE.

Code. $\qquad$ Klinkart Klipatig Klobiter Klonasse Klopfris
Numbers....
Inch...........
Length, inches
Ply............
Per gross...
Wt.per gross,lhs

| $\mathbf{4}$ | $\mathbf{6}$ | $\mathbf{8}$ | $\mathbf{1 0}$ | $+\mathbf{1 2}$ |
| :---: | :---: | :---: | :---: | :---: |
| $1 / 2$ | $3 / 4$ | $3 / 4$ | 1 | 1 |
| $33 / 4$ | $41 / 8$ | $43 / 4$ | 5 | $53 / 8$ |
| 3 | 3 | 4 | 3 | 4 |
| $\$ 0.90$ | .90 | .90 | 1.98 | 1.98 |
| $1 / 4$ | $1 / 4$ | $11 / 4$ | $3 / 8$ | $1 / 2$ |

One gross in a package.
$\dagger$ Pliers for attaching Caldwell's Straps, per dozen


Cut shows Strap.


Cut shows Pliers.


Cut shows "Caldwell's" Hose Straps applied.

## $\dagger$ "BIG SIX" HOSE PATCHES.

## FOR MENDING LEAKY HOSE. SOFT BRASS.

Code $\qquad$ Klopget Klosbeit Klostera
Inch. $\qquad$ $\begin{array}{lll}1 / 2 & 3 / 4 & 1\end{array}$
Per dozen, with pincers...... $\$ 0.75 \quad 1.00 \quad 1.25$
Weight per doz., lbs.......... $3 / 4 \quad 1 \quad 11 / 4$
One dozen in a box.


Each box contains a pair of pincers used in applying patch.
$\dagger$ Carried in San Francicso only.


| Code | Knaben | Knacker |
| :---: | :---: | :---: |
| Inch | 1/2 | 3/4 |
| Per dozen. | \$0.11 | . 11 |
| Weight per doz., lbs.. | 1/4 | 3/8 |

## $\ddagger$ COOPER HOSE MENDERS.

A seamless brass tube. No wires, pliers or mechanical skill required to adjust them. Will not rust and can be used many times.

| Cod | Knadandy | afittum | Knagrunt |
| :---: | :---: | :---: | :---: |
| Size, inch | 1/2 | 3/4 | 1 |
| Per g | \$9.00 | 9.00 | 10.20 |

Three dozen in a box.
$\ddagger$ Carried in Los Angeles only.
HOSE BUSHINGS.
CAST BRASS.

| Code | Knapbet | Knappend | Knaptort | Knarrow |
| :---: | :---: | :---: | :---: | :---: |
| Inch | 1x3/4 | 11/4. $\times 1$ | $11 / 2 \times 11 / 4$ | $\dagger$ ¢x1 $1 / 2$ |
| Per dozen. | \$6.50 | 10.00 | 12.00 | 18.00 |
| Weight per doz., lbs. | 2 | 3 | 5 | 7 |

## HOSE REDUCERS.

CAST BRASS.
Code Knatters Knausing
Inches $1 \times 3 / 4 \quad 11 / 4 \times 3 / 4$
Per dozen
$\$ 6.50 \quad 10.00$
Weight per doz., lbs.
2
3

| Code... Inches | Knauter $\mathbf{1}^{11 / 4} \times 1$ | Knaving $11 / 2 \times 3 / 4$ | Knavish $1_{1 / 2}^{1 / x 1}$ | Kneader $11 / 2 \times 11 / 4$ | $\begin{aligned} & \text { Kneambus } \\ & \mathbf{2 x} \mathbf{1} \end{aligned}$ | Knebelt $2 \times 11 / 4$ | Kneedful $2 \times 11 / 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen | \$10.00 | 12.00 | 12.00 | 12.00 | 18.00 | 18.00 | 18.00 |
| Weight per doz., lbs | 3 | 3 | 4 | 5 | 81/4 | 6 | 7 |

One dozen in a package.

## HOSE NIPPLES.

## CAST BRASS.

| Code | Kneedster | Kneepant |
| :---: | :---: | :---: |
| Inch | $\dagger 1 / 2$ | $3 / 4$ |
| Per dozen. | \$3.50 | 3.50 |
| Weight per doz., lbs.......... | 2 | $21 / 2$ |




One dozen in a package.

## HOSE BIBB ENDS.

CAST BRASS.



One dozen in a package.


## †CALIFORNIA STREET WASHERS.

FOR SPRINKLING OR IRRIGATING PURPOSES IN NON-FREEZING CLIMATES. COMPRESSION BRASS VALVES. HEAVY CAST IRON BOX, JAPANNED. WROUGHT IRON GALVANIZED PIPES.

To set in ground $11 / 2$ feet.

| Code............... Knipbeer | Kniperst | Kniplute | Knipole |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Inches ............ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ |
| Each ............ $\$ 3.50$ | 4.00 | 5.00 | 7.50 |  |
| Weight each, lbs | 10 | $101 / 2$ | $\ldots \ldots$. | $\ldots \ldots$ |
| Each Washer has a key. |  |  |  |  |

## CHICACO GOOSE NECK CONNECTIONS.



[^40]Per dozen ..... $\$ 675$
Weight per doz., lbs. ..... 6

Code.
Each.

## PERFECTION BUGGY WASHERS.

FOR WASHING BUGGIES, AUTOMOBILES, ETC. BALL BEARING JOINTS. ARM $41 / 2$ FEET LONG. THREADED $3 / 4-I N C H$ IRON PIPE, WITH $3 / 4$-INCH HOSE COUPLING.

Number 1

Weight each packed, lbs................... 11 $\$ 24.00$
COUPLING.
---

Reaches vehicle from all sides. No heavy hose to drag. No vehicle to move.


## $\dagger$ "CHAMPION" WATER FILTERS.

## SAME GENERAL CONSTRUCTION AS No. 2. WITH 3/4INCH HOSE THREAD, SO THAT FILTER CAN BE ATTACHED TO FAUCET.

Code

Number.
Length of tube, inches
Diameter of tube, inches 2
Capacity per hour, gallons 4
Each $\$ 2.50$
Weight each, lbs........................................ 1
One in a box.

## $\dagger$ "CHAMPION" WATER FILTERS.

## POLISHED BRONZE METAL. NICKEL.PLATED. WITH GERM.PROOF, NATURAL STONE FILTER TUBES.

The Tubes used in the "Champion" Filters are the only perfect filtering material known. Impurities never penetrate their surface. Its pores are naturally disposed so that while water will rapidly percolate through the material all germs, microbes and impurities of every description remain on the surface, trom which they can be easily washed by brushing, the stone remaining white and pure. All solid, insoluble matter in the water, whether organic or inorganic, is completely separated, leaving bright, clear, pure water as a filtrate.

The rod which passes through the stone gives it strength and stability. Handsome in appearance and very simple in construction.


Cut Shows Style No. 2.


Sectional View.Code., JurgateNumber2
Length of stone, inches ..... 9
Diameter of stone, inches ..... $21 / 2$
Capacity per hour, gallons ..... 25
Connection iron pipe size, inch ..... 1/4
Each ..... $\$ 15.00$
Weight each, lbs ..... 9
Shipping measure each, cubic feet. ..... 1/4

## $\dagger$ "CHAMPION" WATER FILTERS.

The best and most convenient Faucet Filter. Does not interfere with the regular use of a faucet. By simply turning the key of special connection, filtered or unfiltered water can be obtained. Made of brass, nickel-plated.

| Code. | Jurhursch |
| :---: | :---: |
| Number | 7 |
| Length of stone, inches. | 6 |
| Diameter of stone, inches. | $21 / 2$ |
| Capacity per hour, gallons.. | 6 |
| Each.. | \$7.50 |
| Weight each, lbs. |  |

One in a box.


## "CHAMPION" WATER FILTERS.

Code. Jurigand
Number. $11 / 2$
Length of tube, inches
Diameter of tube, inches $21 / 8$
Capacity per hour, gallons$\$ 3.75$Each
$11 / 2$

Weight each, lbs.
One in a box.

## EXTRAS FOR "CHAMPION" WATER FILTERS.

Stones.

| Code $\qquad$ Numbers | Jurigette <br> 1 | Jurigole $11 / 2$ | $\underset{\mathbf{2}}{\text { Jurigust J }}$ | $\begin{aligned} & \text { Jurkwater } \\ & \mathbf{7} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Each | \$0.63 | . 88 | 1.88 | 1.50 |
| Old Style Top Washers. |  |  |  |  |
| Code |  |  | Jurladie | e Jurlidy |
| Numbers |  |  | 1 | 2 |
| Each |  |  | \$0.10 | 20 |

## Old Style Bottom Washers.

Code
Each$\$ 0.10$10

[^41]
## $\dagger$ "SULTANA" WATER FILTERS.




One dozen in a box.

$\dagger$ "CROTON" WATER FILTERS.
CAST BRASS. NICKEL.PLATED. 3/4-INCH HOSE THREADCodeJurensib
Number ..... 3
Length, inches ..... 21/4
Diameter, inches ..... $11 / 2$
Per dozen ..... $\$ 6.00$
Weight per doz., lbs ..... 3One dozen in a box. $\dagger$ Carried in San Francisco only.


\section*{†IMPROVED BENCH

\title{

PLATES.

# PLATES. <br> <br> MPRPATEBENCH

 <br> <br> MPRPATEBENCH}| Code | Liquoret |
| :---: | :---: |
| Number | 3 |
| Inches. | 9x9 |
| Each. | \$3.50 |
| Weight, lbs.. | 18 |

Code................................................... Liquoret
Number................................................. 3
Inches.
\$3.50
Weight, lbs........................................... 18
4
.


#### Abstract

\section*{POLISHED.}

This Bench Plate is so made that it can be readily inserted in any bench of ordinary thickness, and revolves so that different tools may be used in the revolves so that different tools may be used in the revolves so that different tools may be used in the same position.


PLATES.
BENCH PLATES.

CAST IRON. POLISHED.



| Code. | Lispelend | Lisptone |
| :---: | :---: | :---: |
| Numbers | 1 | 2 |
| Inches. | 37 x 8 | 30x8 |
| Each | \$5.00 | 3.00 |
| Weight each, lbs. | 50 | 37 |

## +BURRITT'S PATENT ROOFING DOUBLE SEAMERS.

## FOR STANDING LOCK TIN ROOFING.

The cut represents the Double Seamer turning over the edge of the metal. The treadle closes down the edge.

We commend these Roofing Double Seamers for Standing Lock, because the work is done more evenly than by any other process. They turn the metal directly over and under, do not crimp the tin, and leave the formed locks of uniform height. They do not deface the surface of the roof; will work well over uneven roof boarding. Will double seam hips and ridges with perfect ease. They can be used by either hand or foot power. They will do the work much faster, easier and better than by hand and mallet. They are simple in construction, durable and not liable to get out of order. When shipped, they are fitted for I. C. Tin.

These Double Seamers are now made and can be furnished adapted to several different styles of Iron Roofing; in fact, for the formation of nearly every style of lock now used in applying sheet metals to roofs.

Note.-When ordering Seamers please state whether for common or wide gauge.

| Code | Listonera | Lithagog |
| :---: | :---: | :---: |
| Gauge | Common | Wide |
| Inches | 1x11/4 | $11 / 4 \times 11 / 2$ |
| Per set of 2 pairs.......................... | \$30.00 | 30.00 |
| Weight per set, lbs........................... | 40 | 40 |
| $\dagger$ Carried in San Francisco only. |  |  |

## †COMMON ROOFING TONGS.



## † IMPROVED ROOFING TONGS.

STEEL.

These Tongs are so made that a single pair may be easily adjusted to five different widths of locks, viz.: from $1 / 2$ to $11 / 2$ inches.

Code
Per pair
$\$ 4.00$
Weight per pair, lbs 8

$\dagger$ Carried in San Francisco only.

## †REESE'S ROOFING TONGS.

```
WITH ADJUSTABLE AND REmOVABLE GAUGE.
```


(Patented December, 1884. Improved April, 1899.)

These Tongs will turn any edge from $3 / 4$ to 10 inches by simply adjusting the thumb screw and sliding the gauge to the desired position. They are adapted to edging and bending all kinds of ordinary sheet metal. They are simple in construction, strong, light and durable. Can be used on No. 22 Iron.
Code.
Litografo ......... Weight each, 11 lbs
Each,
$\$ 8.00$

## CUTTER TONGS.



Code.
Litoscopic ........ Weight per pair, ... lbs
Per pair, $\$ 5.00$

WOOD ROOFING FOLDERS.


Cut shows Improved Folder, with Gauge.

$\dagger$ Carried in San Francisco only.

## †ROOFING DOUBLE SEAMERS.

TO MATCH ROOFING TONGS.

| Code................. | Lixabunt | Loadman | Lobafull | Lobagore |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Size, inches........ | $3 / \mathbf{x} \mathbf{1}$ | $\mathbf{1 x 1} 1 / 4$ | $\mathbf{1} 1 / \mathbf{x} \mathbf{1}^{1 / 2}$ | Set |
| Price $\ldots \ldots \ldots . . . . . .$. | $\$ 0.90$ | .90 | .90 | 1.75 |
| Weight each, lbs.. | 9 | 9 | 9 | 18 |



Two pairs constitute a set.

## †A SET OF TINNERS' TOOLS.

| Beakhorn Stake, | 5.00 |
| :---: | :---: |
| 1 Blowhorn Stake. | 5.00 |
| 1 Creasing Stake | 4.00 |
| 1 Square Stake | 3.00 |
| 1 Candle Mould Sta | 2.75 |
| 1 Needle Case Stake | 2.25 |
| 1 Each Hollow Punches, 1/2, 3/4, 1, 11/4, |  |
| 11/2, 13/4 inches... | 5.50 |

Blowhorn Stake
5.00

1 Square Stake. 3.00

Candle Mould Stake
Each Hollow Punches, $1 / 2,3 / 4,1,11 / 4$,
$11 / 2,13 / 4$ inches

1 Set Solid Punches, 4 Punches, 2 Chisels $\$ 0.72$
I Pair No. 4 Bench Shears..................... 5.00
1 Each Raising Hammers, Nos. 1 and 4, handled.
3.20

1 Each Setting Hammers, Nos. 2 and 3, handled
1 No. 5 Riveting Hammer, handled.......... . 38

Packed in one case.
Code.
Lobberend .......Weight per case, 165 lbs
†RING SCRATCH AWLS.

SOLID STEEL.


Code. No.
Lobside 1-Length, $81 / 2$ inches. Weight per doz., 1 lb

Per dozen, $\$ 1.50$
One dozen in a box.

## †SOCKET SCRATCH AWLS.

```
FORGED STEEL. POLISHED.
```

| Code. | No. |
| :---: | :--- |
| Lobulate......... | 1-Length of steel, 6 inches. Weight per doz., $11 / 2 \mathrm{lbs} \ldots \ldots \ldots \ldots \ldots . .$. Per dozen, $\$ 2.00$ |
| One dozen in a box. |  |

†PLAIN SCRATCH AWLS.

```
PLAIN BEECH HANDLES.
```

Code. No. 2-Length of steel, 5 inches. Weight per doz., $11 / 2 \mathrm{lbs}$ $\qquad$ Per dozen, \$1.00 One dozen in a box.
†"HURWOOD" TINNERS’ AWLS.

EXTRA QUALITY.

WILL NOT BREAK OR TURN ON POINTS. BEST CRUCIBLE 5/16-INCH STEEL.


Code.
Locabiter Entire length, $71 / 2$ inches; blade, $33 / 4$ inches. Weight per doz., $11 / 2 \mathrm{lbs}$...Per dozen, $\$ 4.00$ One dozen in a box.

## † GASFITTERS' AUGERS.

ALL STEEL.


| Code. | Localiber | Localized | Locations | Lochbent | Lochome | Lochsage | Locitando |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size of Auger, inches............. | $3 / 4$ | 7/8 | 11/4 | $11 / 2$ | 13/4 | 2 | $21 / 2$ |
| To cut holes for pipe, inches.... | 3/8 | 1/2 | 3/4 | 1 | 11/4 | $11 / 2$ | 2 |
| Each.. | \$1.13 | 1.25 | 1.75 | 2.25 | 2.50 | 3.00 | 3.50 |

## PLUMBERS' TOOL BACS.



No. 2 has Leather Bottom.
No. 3 has Leather Bottom and Sides.


| Code | Locomote |
| :---: | :---: |
| Style | Philadelphia Pattern |
| Per do | \$5.00 |



Loose.
†TAP BORERS.
EXTRA HEAVY SHANKS.

One dozen in a box.


Cut shows No. 2.


## $\dagger$ TAP BORERS.

EXTRA HEAVY SHANKS.

| Code | Loculado |
| :---: | :---: |
| Style.. | New York Pattern |
| Per do | \$5.00 |

One dozen in a box.


## †GREASE, ROSIN AND FLOUR BOXES.

## BRASS POLISHED



Code.
Locutori.
Medium size..
One-half dozen in a box.
†WIRE PIPE BENDERS.
STEEL WIRE. JAPANNED.


+Carried in San Francisco only.

## †VANDERMAN'S ELASTIC LEAD PIPE BENDERS.

## 



Cut shows round trap bent around a 3 -inch Soil Pipe and Bender easily withdrawn.

## Directions for Using.

Shove or draw the Bender into the pipe until the point is reached where the bend is to be made, and bend the pipe. The Bender can then be easily removed. If the bends in the pipe are rery short or close and the Bender does not come out of the pipe easily, it can be made to do so by slackening up a little on the bends. To make a bend midway in a long length of pipe, attach a wire or strong cord to each end of the Bender, so as to draw it in and out. If the bends are short, or more than one in number, the Bender will work in and out more easily by lubricating the Bender or the inside of the pipe with oil, soap or water.

| Code. | Lofgebe | Loforine | Lofreden |
| :---: | :---: | :---: | :---: |
| Numbers | 2 | 3 | $\pm$ |
| Size pipe, inches | 11/4 | $11 / 2$ | 2 |
| Length, inches... | 24 | 24 | 24 |
| Each. | \$1.75 | 2.00 | 2.50 |

## DUSTERS.




FLAT SOIL BRUSHES.

| ALL BRISTLE. |  |
| :---: | :---: |
| Code....... | Logarito |
| Width, inches. |  |
| Per dozen... | \$1.00 |
| One |  |

## †ROUND SOIL <br> BRUSHES.

ALL BRISTLE.


Code
Diameter, inches
50 -
Per dozen.
$\$ 0.75$
One dozen in a box.
+Carried in San Francisco only.

# LANTERN CHISELS. 


Code................................................. Logenlite
Each......................................................... $\$ 0.12$

One dozen in a box.

## WIRE CHISELS.



PLUMBERS' COLD CHISELS.


## FORGED STEEL COLD CHISELS.

```
OCTAGON. HALF-POLISHED. TURNED HEADS.
```



No. 1.

| Code | Lomander | Lombarda | Lombatel | Lombrico | Lomentor | $\begin{gathered} \text { Lompenı } \\ 1 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inch. | 3/8 | 1/2 | 5/8 | 3/4 | 7/8 |  |
| Per dozen | \$3.60 | 4.50 | 6.00 | 7.50 | 10.00 | 12.80 |
| Weight per doz., lbs | 2 | 4 | 7 | 10 | 14 | 18 |

## TINNERS' AND PLUMBERS' TOOLS.

## CAPE CHISELS.

```
OCTAGON CAST STEEL.
```


Code Lonchere
Inch.. ..... $1 / 4$
Per dozen. ..... $\$ 6.00$
Weight per doz., lbs ..... 6
DIAMOND NOSE CHISELS.
OCTAGON CAST STEEL.

CodePer dozen.$\$ 6.00$
Weight per doz., lbs ..... 12

+ ROUND NOSE CHISELS.
OCTAGON CAST STEEL.

Code
Per dozen. ..... $\$ 6.00$
W'eight per doz., lbs. ..... 12
†HALF-ROUND NOSE CHISELS.
OCTAGON CAST STEEL.

CodePer dozen$\$ 6.00$
Weight per doz., lbs ..... 12


| Code | Longipede | Longirust | Longiturn |
| :---: | :---: | :---: | :---: |
| Inches. | 1 | 11/2 | 2 |
| Length, inches ... | $10^{1 / 2}$ | 101/2 | 14 |
| Per dozen | \$6.00 | 9.00 | 11.50 |
| Weight per doz., lbs. |  | $101 / 2$ | 23 |

## FLOOR CHISELS.

ROUND CAST STEEL.


| Code | Longkame | Longmeter | Longmind |
| :---: | :---: | :---: | :---: |
| Inches | 2 | $\stackrel{3}{12}$ | 15 |
| Length, inches.. | 9 | 12 | 15 |
| Per dozen. | \$20.00 | 20.00 | 20.00 |
| Weight per doz. |  |  |  |

FLOOR CHISELS.
OCTAGON CAST STEEL.


## $\dagger$ H. M. \& S. CAULKING CHISELS.

FORGED STEEL. OIL TEMPERED.



## †H. M. \& S. CAULKING CHISELS WITH OFFSET.

FORGED STEEL. OIL TEMPERED.



| Code. | Loodert | Loodspar |
| :---: | :---: | :---: |
| Style | Right | Left |
| Thickness of blade at end, inch. | 3/16 | 3/16 |
| Per dozen. | $\$ 5.00$ | 5.00 |
| Weight per doz., lbs | 12 | 12 |

†H. M. \& S. CAULKING CHISELS FOR CORNERS.

FORGED STEEL. OIL TEMPERED


Code Looter
Thickness of blade at end, inch. ..... 3/16
Per dozen ..... $\$ 5.00$
Weight per doz., lbs ..... 12+ Carried in San Francisco only.

## H. M. \& S. YARNING CHISELS.

```
FORGED STEEL. OIL TEMPERED.
```




Cut Shows Mole Skin Cloth.

WIPING CLOTHS.
TALLOW DIPPED.
Mole Skin.
Code.
Loquebard Loquelari Loramenti
 $\begin{array}{lll}\$ 2.50 & 2.50 & 2.50\end{array}$
Per dozen.
Code.
Lordatos Lordope
Inches..................................... 3x3 31/2x31/2
Per dozen................................ $\$ 2.50$ 2.50
One dozen in a package.

## Ticking.



One dozen in a package.


SOIL CUPS.
SEAMLESS COPPER WITH BAIL.


One-half dozen in a package.
$\dagger$ Carried in San Francisco only.

## RUBBER FORCE CUPS.


 One-half dozen in a box.

## PLUMBERS' FRIEND.

```
WOOD HANDLES. RUBBER CUPS. WOOD HANDLES. RUBBER CUPS.
```

Code.

| Length of handle, inches | $2 \bar{y}$ | 38 | 38 |
| :--- | :---: | :---: | :---: |
| Diameter of cup, inches.. | 4 | 4 | 4 |
| Each.............. | $\$ 1.75$ | 1.75 | 2.00 |
| Weight each, lbs.. | 1 | $11 / 2$ | $11 / 2$ |

## †SAMSON PLUMBERS' FORCE CUP.

WOOD HANDLES. RUBBER CUP. WITH VALVE.
Code
Length of handle, inches...... .............................. 48
Diameter of cup, inches................................................. 6
Each................................................................ \$4. 00


Rubiver Cup


Section showing Valve and Air Passage

## SOLDER COPPERS.

| POINTED |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Code ........... Lotomeet | Lotosortie | Lotsbest | Lotterban | Lottokar | Lotusblum | Loubane | Louca men | Loucha |
| Numbers........... 1 | † $11 / 2$ | 2 | 3 | $\pm$ | 5 | 6 | $\dagger$ | +8 |
| Weight per pair, lbs 1 | $11 / 2$ | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Per pound ......... \$..... | ...... |  | ...... | ..... |  |  |  |  |

## †BOTTOM COPPERS.



| Code | Lounger | Louvanist | Louveter | Lowering |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 3 | 4 | \% | 6 |
| Weight per pair, lbs. | 3 | 4 | $\overline{5}$ | 6 |

[^42]```
SWIVEL HEADS
```




ROOFING COPPERS.


ROUND IRONS.


## SOLDER COPPER HANDLES.

SOFT WOOD. WIRE FERRULES.

| Code | Luchetto | Lucidaro |
| :---: | :---: | :---: |
| Size................................... | Medium | $\dagger$ Extra Large |
| Per dozen. | \$0.45 | 1.15 |
| Weight per doz., lbs............. | 3 | 5 |
| Packed as orde | ed. only. |  |


+Carried in San Francisco only.


## RECISTERINC WASHER CUTTERS.

FINEST QUALITY OF TOOL STEEL. RULE 1/i6 TO $2 \frac{1}{4}$ INCHES, BOTH SIDES.

Code Luciparen
Number
Per dozen. $\$ 20.00$
Weight per doz., lbs $81 / 4$ One-half dozen in a box.

WASHER CUTTERS.
Code1
Per dozen. ..... $\$ 10.00$
Weight per doz., lbs ..... 6

One-half dozen in a box.

## VANDERMAN'S LEAD PIPE CUTTERS.

JAPANNED. CUTS LEAD PIPE FROM $3 / 8$ TO $11 / 2$ INCHES.

$\dagger$ Carried in San Francisco only.

## HEADSON PIPE CUTTER.

## LEAVES THE PIPE ABSOLUTELY FREE FROM ALL BURRS, INSIDE AND OUT. CUTS AS CLEAN AND SMOOTH AS A LATHE. DOES NOT JAM OR SWELL THE END OF THE PIPE. IS <br> AUTOMATIC IN ADJUSTMENT AND DOES AWAY WITH SCREW MOVEMENT.



| Code | Lucratrust | Lucratusel | Lucratur |
| :---: | :---: | :---: | :---: |
| Number | 1 | 2 | 3 |
| Cuts pipe, inches. | 1/4 to 1 | 1 to 2 | 2 to 4 |
| Each | \$12.50 | 12.50 | 25.00 |
| Weight each, lbs.. | $31 / 2$ | 6 | 20 |

THE CUTTER THAT CUTS. ALMOST INDESTRUCTIBLE.

Saves reaming the pipe.
Saves crushing.
Tool can be ground.
Does more and better work.

Saves cracking or grooving.
Leaves no burrs.
All parts are interchangeable.
Lasts longer.

It is not the first cost of a tool, but the amount of work performed that tells the story.

## Description :

The above cut represents the Cutter in operation with 1 -inch pipe, showing the manner of holding pipe between the anti-friction roller and inserted jaw No. 10 and is adjusted to the pipe by merely pushing the handle forward until anti-friction rolls come in contact with pipe. Then take up lost motion by turning the fluted handle No. 5 which causes the frame portion 3 to slide on the main frame, thus making adjustments for all size pipes. No. 0 is the cutting tool and is $1 / 2$ inch wide, $1 / 8$ inch thick and 2 inches long and is made of air hardening steel, and is so made that it can be ground red hot on an emery wheel and still retain its temper. To operate the cutting tool after the pipe is in position turn ball until knife touches the pipe, then turn cutter one revolution of the pipe. Then feed cutting tool $1 / 4$ turn for each revolution of cutter until pipe is cut off. Tool No. 0 never projects more than the thickness of the pipe while cutting. This tool is reversible, being ground on both ends.

CAUTION-Always be sure that cutter is fastened firmly to pipe before feeding in the cutting tool.
PIPE CUTTERS.

## BARNES' PIPE CUTTERS.

THREE WHEELS.


| Code | Lucravera | Lucretil |
| :---: | :---: | :---: |
| Numbers. | 1 | 2 |
| For pipe, inches. | 1/8 to 1 | $1 / 2$ to 2 |
| Each | \$4.50 | 6.00 |
| Weight each, lbs | $31 / 4$ |  |

Extra Cutter Wheels.


STANWOOD'S PIPE CUTTERS.


| Code. | Luctamino | Luctatore | Luctavimo |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
| For pipe, inches. | 1/8 to 1 | 1 to 2 | 2 to 3 |
| Each. | \$1.50 | 2.25 | 7.00 |
| Weight each, lbs. | $31 / 2$ | 81/2 | 24 |

## Extra Cutter Wheels.

| Code. | Lutificit | Luctisono | Lucubrado |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
| Each | $\$ 0.12$ | 18 | 25 |

Extra Blocks and Wheels.

| Code | Lucubrated | unculent | Lucullano |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
|  | \$0.40 | 60 | . 0 |

## SAUNDERS' PIPE CUTTERS.



| Code |  |  |  |  |  | Ludabauk | Ludendor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers |  |  |  |  |  | 1 | $\underline{\square}$ |
| For pipe, inches. |  |  |  |  |  | 1/8 to 1 | 1 to 2 |
| Each. |  |  |  |  |  | \$3.00 | 4.50 |
| Weight each, lbs. |  |  |  |  |  | $31 / 2$ | $61 / 2$ |
|  | Extra | Cutter W | heels. | $\dagger$ Extra | Rollers. | Extra | Pins. |
| Code. | Ludergale | Ludibunt | Ludicott | Ludicrabo | $\begin{gathered} \text { Ludificat } \\ \hline \end{gathered}$ | Ludmille | Luendise |
| Each................................... | \$0.24 | . 32 | . 60 | 24 | . 32 | . 10 | . 10 |

$\dagger$ Carried in San Francisco only.

## WING DIVIDERS.

```
FORGED CAST STEEL. FULL POLISHED.
```




One-half dozen in a box.

## HURWOOD'S SCREW DRIVERS.

INDESTRUCTIBLE. WARRANTED BEST QUALITY STEEL.


The steel extends from point of blade through the handle, and forms a top for rough use. Impossible to twist the handle on the steel. No amount of hammering on the head can injure the handle.

| Code. | Luizenest | Lulismor |
| :---: | :---: | :---: |
| Inches | 4 | 6 |
| Per dozen.. | \$4.25 | 6.00 |
| W'eight per doz., lbs. | $\underline{1} / 2$ | 4 |

One-half dozen in a box.

## HURWOOD'S MACHINE SCREW DRIVERS.

$3 / 8 \cdot I N C H$ STEEL. A GOOD SCREW DRIVER FOR LINEMEN. INDISPENSABLE FOR PLUMBERS AND STOVE MOUNTERS. ESPECIALLY ADAPTED FOR HEAVY WORK IN PLACES WHERE IT IS IMPOSSIBLE TO USE A LONGER DRIVER


Cut shows Full Size.


One-half dozen in a box.

+ Carried in San Francisco only.


## SUCCESS EMERY GRINDER.

FOR STOVE DEALERS, PLUMBERS, TINNERS, BICYCLE REPAIRMEN, BLACKSMITHS, JEWELERS CARPENTERS, BUTCHERS, HARNESSMAKERS, WAGONMAKERS, MECHANICS, FARMERS AND MINERS.



For grinding Drills, Castings, Machine Parts, Knives, Scissors, and all kinds of Tools.

This machine when set up stands 4 feet high; the upright or standard is made of $3 / 4$-inch tubing, and is very solid and strong. The emery wheel is of the highest grade and is 8 inches in diameter by $1 \frac{1}{4}$ inches face. It is supplied with a suitable and substantial rest. It has no belt to slip, loosen or break, neither has it lead teeth to wear out and bind.

The movement of the foot operates a ball ratchet, which drives the emery wheel at 3,000 revolutions per minute.

The machine screws to the floor and wall, and is quickly and easily set up.

Can ${ }_{k}$ also be used for buffing.
Code
Each complete with one emery wheel ..... $\$ 6.50$
Weight each, lbs ..... 25
Shipping measurement, cubic feet
One in a crate.
Code Luminedo
Extra emery wheels, each ..... $\$ 1.25$
Code ..... Luminoa
Cotton buffing wheels, each ..... $\$ 1.25$

## BREAST DRILLS.

## GEARED. COMPLETE WITH THREE DRILLS AND ONE REAMER.



Code
Lumbagin Luminand
Numbers
Each
$\$ 3.60 \quad 2.50$
Weight each, lbs
$63 / 4$
$61 / 2$
One in a box.
No. 1 is double-geared and polished. No. 3 is single-geared and japanned.


## TINNERS' MALLETS.

SELECTED HICKORY.


†PLUMBERS' SIDE EDGES.
BEST.

Code
†PLUMBERS' DRESSERS.



Lonse.
$\dagger$ Carried in San Francisco only.


| BOXWOOD. |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Code.......... | Luridato | Lusingame | Lusitamo | Lustgang |  |
| Inches....... | $\mathbf{1}$ | $\mathbf{1 1 / 4}$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |  |
| Per dozen.... | $\$ 2.00$ | 2.00 | 2.00 | 2.00 |  |
| Wt. doz., lbs | $2 / 3$ | 1 | $11 / 2$ | 3 |  |
|  |  | Loose. |  |  |  |



TURN PINS.

| BEST. |  |  |  |
| :---: | :---: | :---: | :---: |
| Code. | Lustihate | Lustijag | Lustparty |
| Numbers | 1 | 2 | 3 |
| Largest diameter, in.... | $11 / 2$ | 2 | $21 / 2$ |
| Per dozen ................. | \$3.00 | 3.00 | 3.00 |
| Weight per doz., lbs.... | 13/4 | 33/4 | 5 |
| Loose. |  |  |  |
| $\dagger$ Carried in San Francisco only. |  |  |  |



## † SHAVE HOOKS.

STEEL BLADES. BLACK ENAMELED WOOD HANDLES.



Cut Shows Oval Hook.


One-half dozen in a box.
The Adjustable Hook has an oval head that can be set at any angle to the handle.
† POT HOOKS.
MADE OF $1 / 4-I N C H$ STEEL ROD.



## $\dagger$ FLAT FILES.




8 -inch, one dozen in a box. 10 to 14 -inch, one-half dozen in a box.
$\dagger$ ROUND FILES.



One-half dozen in a box.

## †HAND GROOVERS.

```
                        FORGED STEEL.
```



| Code............ | Luzidios | Lycabet | Lycapsor | Lycomede | Lycotropic | Lycurgid | Lydamar | Lydesto | Lydock | Lydrome |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers...... | $\mathbf{0 0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| Groove, inch... | $1 / 2$ | $7 / 16$ | $13 / 32$ | $3 / 8$ | $5 / 16$ | $1 / 4$ | $3 / 16$ | $5 / 32$ | $1 / 8$ | $1 / 16$ |
| Each............ | $\$ 0.75$ | .75 | .63 | .63 | .50 | .50 | .37 | .37 | .25 | .25 |
| Weight each, lbs... | $11 / 4$ | $11 / 8$ | 1 | 1 | $3 / 4$ | $3 / 4$ | $3 / 4$ | $3 / 4$ | $3 / 4$ | $5 / 8$ |

[^43]
†PLUMBERS' TORCHES.

POLISHED.

| Code. | Mabellin | Mabouder |
| :---: | :---: | :---: |
| Style................................. | Tin | Brass |
| Per dozen.......................... | \$8.00 | 15.00 |
| Weight per doz., lbs........... | 10 | 12 |
| Loose. |  |  |

†LOOKING GLASSES.

```
PLATE GLASS. BRASS BOUND.
```


Code.

## †WIRE GAUGES.

| ROUND. POLISHED CAST STEEL. ENGLISH |  |  |
| :---: | :---: | :---: |
| STANDARD. |  |  |
| Code | Macadure | Macafurst |
| Number. | 1 | 2 |
| Gauge Nos. | 0 to 36 | 6 to 36 |
| Per dozen. | \$24.00 | 18.00 |
| Weight per doz., lbs. | $31 / 4$ | 13/4 |
| One-half dozen in a box. |  |  |
| Same as Stubs' or Birmingham Gauge. |  |  |



## †BALL PEIN HAMMERS.

EXTRA QUALITY CAST STEEL. POLISHED. SECOND GROWTH HICKORY HANDLES.



One-third dozen in a box.

## †STRAIGHT PEIN HAMMERS.

## EXTRA QUALITY CAST STEEL. POLISHED. SECOND GROWTH HICKORY HANDLES.



| Code | Macarena | Macarıote | Macaroni |
| :---: | :---: | :---: | :---: |
| Numbers | 0 | 1 | 2 |
| Weight each, unhandled, | 1 | $11 / 4$ | $11 / 2$ |
| Per dozen. | \$12.50 | 13.50 | 14.50 |
| Weight per doz., lbs. | 18 | 22 | 26 |

## †PLUMBERS' HAMMERS.

## EXTRA QUALITY CAST STEEL



One-third dozen in a box.

## †TINNERS' RIVETING HAMMERS.



One-half dozen in a box.

## †TINNERS' SETTING HAMMERS.



One-half dozen in a box.
$\dagger$ Carried in San Francisco only.

## † TINNERS' RAISING HAMMERS.

```
CAST STEEL. POLISHED FACES. SELECTED HANDLES.
```



| Cod | Machinale | Machinise | Machuron | Maciform |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 | 4 |
| Diameter small head, inches | 15/8 | $11 / 2$ | 11/4 | 1 |
| Diameter large head, inches | $21 / 4$ | 2 | $13 / 4$ | $11 / 4$ |
| Weight each, unhandled, lbs | 5 | $33 / 4$ | 21/4 | $11 / 4$ |
| Handled, each. | \$2.35 | 1.85 | 1.35 | . 85 |
| Weight per doz., lbs. | 60 | 42 | 24 | 18 |

Loose.

## †PLANISHING HAMMERS.

```
    WITHOUT HANDLES.
```

| Code | Macinava | Macomade |
| :---: | :---: | :---: |
| Weight each, lbs . | 11/4 | $11 / 2$ |
| Per pound. | \$1.00 | 1.00 |



Loose.

## BLACK EAGLE HATCHETS.



One-half dozen in a box.
† Carried in San Francisco only.

## †CHIPPING KNIVES.

## FORGED FROM EXTRA QUALITY STEEL. LEATHER SCALES.




Loose.

## MELTING LADLES.

FORGED OF BEST CHARCOAL IRON. EXTRA HEAVY. SINGLE LIP. RIVETED HANDLES.


| Code. Size, inches.. | $\begin{aligned} & \text { Macrobio } \\ & \mathbf{2 1 / 2} \end{aligned}$ | $\begin{gathered} \text { Macroglen } \\ \mathbf{3} \end{gathered}$ | Macrotar $\dagger 31 / 2$ | $\begin{gathered} \text { Macrozam } \\ \mathbf{4} \end{gathered}$ | Mactabite $\dagger 41 / 2$ | Maculate $\dagger 5$ | $\begin{aligned} & \text { Maculeron } \\ & +6 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$2.75 | 3.25 | 3.50 | 4.00 | 4.50 | 5.00 | 6.00 |
| Weight per doz., lbs.......... .. | $71 / 2$ | $81 / 4$ | $91 / 4$ | $101 / 2$ | 13 | 151/4 | 18 |
| One-half dozen in a package. |  |  |  |  |  |  |  |

## SOLDER POTS.


$\dagger$ Carried in San Francisco only.

## †SOLDER MOULDS.

CAST IRON.

Code
Top measure, inches. ..... $5 \times 10$
Each. ..... $\$ 0.65$
Weight each, lbs ..... 11

## †STRAP SOLDER MOULDS.

CAST IRON.


Code

Weight each. lbs.
$\dagger$ Carried in San Francisco only.

## †HOTCHKISS' PATENT CUTTING NIPPERS.



Cutting parts made to gauge of choice steel. Can be taken off to be ground, and when worn out can be replaced at sligit expense, making the tool as good as new. All extra cutters warranted to interchange. The center of rivet being only three-fourths of an inch from the cutting edge, they have nearly double the cutting power of most other styles.

| Code | Madescun | Madidare | Madorette | Madracaro |
| :---: | :---: | :---: | :---: | :---: |
| Numbers. | 1 | 2 | 3 | 4 |
| Inches. | 12 | 11 | 10 | 8 |
| Each. | \$2. 25 | 2.00 | 1.75 | 1.50 |
| Weight each, lbs. | 2 | 13/4 | 11/4 | 1 |

One in a package.
$\dagger$ Extra Cutters for Hotchkiss Nippers.

| Cod | Madreclam | Madretorm | Madreport | Madrigado |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 | 4 |
| Per pair. | \$0.40 | . 40 | 40 | . 35 |

†IMPROVED CUTTING NIPPERS.

EXTRA CAST STEEL. SOLID JAWS.




## CHACE'S ZINC OILERS.

## SPRING BOTTOMS

| Code. | Krumpel | Krystal | Kubikfut | Kuchent |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 0 | 1 | 2 | 3 |
| Capacity | 1/2 gill | 3/4 gill | 13/4 gills | 1/2 pt. |
| Diameter, inches | $21 / 8$ | $25 / 8$ | $31 / 4$ | 33/4 |
| Per dozen | \$1.25 | 1.50 | 2.00 | 2.25 |
| Weight doz., lbs. | 1 | $11 / 4$ | 2 | 23/4 |
| Code |  | Kuddebor | Kugelart | Kugelass |
| Numbers |  | 4 | 5 | 6 |
| Capacity |  | 3/4 p | 1 pt . | pts. |
| Diameter, |  | $41 / 8$ | $43 / 8$ | 43/4 |
| Per dozen. |  | \$2.75 | 3.50 | 4.50 |
| Weight per doz., | ... | 31/4 | $31 / 2$ | 4 |

Nos. 0 and 1 , one dozen in a box.
Nos. 2 to 6 , one-half dozen in a box.


## CHACE'S BRASS OILERS.

## SPRING BOTTOMS.

| Cod | Kugelkarn | Kugelmode | Kugelstunt |
| :---: | :---: | :---: | :---: |
| Numbe | 2 | 3 | 4 |
| Capacity .................. | 13/4 gills | 1/2 pt. | 3/4 pt. |
| Diameter, inches ........ | 31/4 | $33 / 4$ | $41 / 8$ |
| Per dozen. | \$3.50 | 4.00 | 4.75 |
| Weight per doz., lbs... | 2 | 23/4 | 31/4 |
| Code |  | Kugelwahr | Kugelzon |
| Numbers |  | 5 | 6 |
| Capacity |  | 1 pt . | 11/4 pts. |
| Diameter, inches |  | $43 / 8$ | 43/4 |
| Per dozen... |  | \$6.00 | 7.50 |
| Weight per doz., lbs. |  | $31 / 2$ | 4 |

Add to above list for long spouts $\$ 0.25$ per doz. Add to above list for bent spouts $\$ 0.25$ per doz.

One dozen in a box.
$\dagger$ Carried in San Francisco only.



## †CHACE'S COPPER OILERS.

## SPRING BOTTOMS.

| Code | Kuhaup | Kuhblat | Kuhdart |
| :---: | :---: | :---: | :---: |
| Numbers | 2 | 3 | 4 |
| Capacity | 13/4 gills | 1/2 pt. | 3/4 pt. |
| Diameter, inches | $31 / 4$ | 33/4 | $41 / 8$ |
| Per dozen. | \$3.75 | 4.25 | 5.00 |
| Weight per doz., lbs | 2 | 23/4 | $31 / 4$ |
| Code.. |  | Kuhfing | Kuhfeuss |
| Numbers |  | 5 | 6 |
| Capacity. |  | 1 pt . | $11 / 4 \mathrm{pts}$. |
| Diameter, inches |  | $43 / 8$ | 43/4 |
| Per dozen |  | \$6.25 | 8.00 |
| Weight per doz., lbs. |  | $31 / 2$ | 4 |

Add to above list for long spouts $\$ 0.25$ per dozen.
Add to above list for bent spouts $\$ 0.25$ per dozen.
One dozen in a box.

## †SEWING MACHINE OILERS.

TIN.
Code Kuhglot
Per dozen ..... $\$ 0.83$
Weight per doz., lbs ..... 3/4
One dozen in a box.

## †CHACE'S TIN OILERS.

SPRING BRASS BOTTOMS.

| Code | Kuhlans | Kuhmelk | Kuhpock | Kuhs |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |  |
| Capacity | 3/4 gill | 13/4 gills | 1/2 pt. | $3 / 4 \mathrm{pt}$. |
| Diameter, inches | $25 / 8$ | 31 | $33 / 4$ | $41 / 8$ |
| Per dozen. | \$1.75 | 2.50 | 3.00 | 3.50 |
| Weight per doz., lbs. | 11/4 | 2 | 23/4 | 31/4 |

No. 1, one dozen in a box.
Nos. 2 to 4 , one-half dozen in a box.
$\dagger$ Carried in San Francisco only.
† FLAT-NOSE PLIERS.


One-half dozen in a box.

## ROUND-NOSE PLIERS.

FORGED STEEL POLISHED JAWS. BOX JOINTS.



One-half dozen in a box.

## COMBINATION PLIERS.

FORGED STEEL. GRIPPS FROM $3 / 16-1 N C H$ ROUND TO $1-I N C H$ ROUND OR SQUARE.


Code.
Style.
Polished Nickel-plated 6
\$13.50
Per dozen
es. $\qquad$

$$
13.50
$$

Weight per doz., lbs.
$\dagger$ Carried in San Francisco only.

## SIDE-CUTTING PLIERS.

FORGED STEEL. POLISHED JAWS. RAISED CUTTERS. BOX JOINTS.



| Code.. Inches. | Magenkranz 5 | $\underset{6}{\text { Magenkreb }}$ | $\underset{7}{\text { Magenpent }}$ | Magested <br> 8 |
| :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$12.50 | 13.50 | 17.00 | 20.00 |
| Weight per doz., lbs. | $11 / 2$ | 4 | 7 | 10 |

One-half dozen in a box.

## † BURNER PLIERS.

## CAST STEEL. NICKEL.PLATED.



One-half dozen in a box.

## $\dagger$ CAS PLIERS.

## CAST STEEL. NICKEL.PLATED.


Code
Inches. ..... 7
Per dozen. ..... $\$ 11.75$
Weight per doz., lbs. ..... $51 / 2$

One-half dozen in a box.
$\dagger$ Carried in San Francisco only.
$\dagger$ CAS PLIERS.
CAST STEEL. POLISHED JAWS. BLACK HANDLES.


| Code <br> Inches | $\begin{gathered} \text { Magistrad } \\ \mathbf{8} \end{gathered}$ | $\begin{aligned} & \text { Magnanimo } \\ & \mathbf{9} \end{aligned}$ | $\begin{aligned} & \text { Magnatibo } \\ & \mathbf{1 0} \end{aligned}$ | $\begin{aligned} & \text { Magneticus } \\ & 11 \end{aligned}$ | $\begin{aligned} & \text { Magnetist } \\ & 12 \end{aligned}$ | Magnetoid 13 | $\begin{aligned} & \text { Magnifico } \\ & \mathbf{1 4} \end{aligned}$ $14$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per dozen. | \$8.25 | 9.25 | 10.70 | 12.00 | 13.00 | 15.00 | 17.00 |
| Weight per doz., lbs.......... | $61 / 2$ | 8 | 11 | 13 | 14 | 15 | 17 |

One-half dozen in a box.
$\dagger$ BENDING PINS.

```
STEEL. BOTH ENDS BENT.
```



Loose.

## †BLOW PIPES.

POLISHED BRASS.

| Code $\ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~$ | 10 |
| :--- | :--- |

Per dozen 10

Weight per doz., lbs
$\$ 4.50$
$1 / 2$
Loose.

## UNIVERSAL SOIL PIPE PLUGS.

This Plug will fit light, heavy, or extra heavy pipe, and make a perfect joint. For Hub Ends one size larger than bore of pipe must be used.
Code
$\begin{array}{ccc}\text { Magrapher } & \text { Maguntina } & \text { Mahaleb } \\ \mathbf{2} & \mathbf{3} & \mathbf{4}\end{array}$
Size, inches
$\$ 1.00 \quad 1.25 \quad 1.50$
Each $\qquad$
Weight each, lbs.
Code
Mahlband
Mahlgest
Size, inches........................ † $\ddagger$ † 6
Each ................................ \$2.00 2.50
Weight each, lbs.
..... 81⁄2

Loose.
$\dagger$ Carried in San Francisco only.


## DUPLEX TESTING PLUGS.

MADE OF THE BEST MALLEABLE IRON AND GUARANTEED NOT TO BREAK. THE ONLY PLUG THAT WILL TEST A HOPPER TRAP.


Cut Shows Plug Attached to Different Sizes of Pipe and Hopper Trap.
Every Plug will test 2, 3, and 4-in. Light and Extra Heavy Soil Pipe and Hopper Trap; and the same Plug with an extra Plate will Test 5 and $6-\mathrm{in}$. Soil Pipe.

†PUNCHES AND CHISELS.

IN SETS.

Consist of 1 Prick Punch, 1 Wire Chisel, $3 / 4$ inch; 1 Lantern Chisel, 1 Solid Punch each, Nos. 3, 4 and 5.
Code
Mahlzette
Per set...... ...................................... \$0.75
Weight per set, lb
1
One set in a box.

## $\dagger$ †OLID PUNCHES.

Full size of Ends.

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nos. 0 | 1 | 2 | 3 | 4 | 0 | 0 |


| $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $9 / 32$ | $8 / 32$ | $7 / 32$ | $6 / 32$ | $5 / 32$ | $4 / 32$ | $3 / 32$ | $2 / 32$ | $3 / 64$ |
| $\$ 0.12$ | .12 | .12 | .12 | .12 | .12 | 12 | .12 | .12 |
| 2 | $13 / 8$ | $11 / 4$ | $11 / 4$ | $11 / 4$ | $11 / 8$ | $11 / 8$ | 1 | $3 / 4$ |

$\dagger$ Carried in San Francisco only.

## TRIVET SETS.

## FORGED STEEL. POLISHED AND BLUED.



Full Size of Holes.


## †PRICK PUNCHES.


Code ..... $\$ 0.12$
Weight per doz., lb One dozen in a box.

## HOLLOW PUNCHES.

FORGED STEEL.


| Code.. Inches. | $\begin{gathered} \text { Malandane } \\ 1 / 4 \end{gathered}$ | $\begin{aligned} & \text { Malapert Ma } \\ & 3 / 8 \end{aligned}$ | Malavised 1/2 | Malaxando 5/8 | $\begin{gathered} \text { Malaxate } \\ 3 / 4 \end{gathered}$ | Malcopert 7/8 | $\begin{aligned} & \text { Maldecimo } \\ & \quad 1 \end{aligned}$ | Maldizent $11 / 8$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.25 | . 38 | . 50 | . 63 | . 75 | . 88 | 1.00 | 1.15 |
| Weight per doz., lbs... | 1 | $11 / 2$ | 3 | 4 | 5 | 7 | 9 | 15 |
| Code .. Inches. | Maledixer $11 / 4$ | $\begin{gathered} \text { Malefacto } \\ 13 / 8 \end{gathered}$ | $\begin{gathered} \text { to Maletine } \\ 11 / 2 \end{gathered}$ | Malifera $13 / 4$ | Malignor 2 | Malleator $21 / 4$ | $\begin{aligned} & \text { Malmond } \\ & 21 / 2 \end{aligned}$ | 23 |
| Each.... | \$1.25 | 1.38 | 1.50 | 1.75 | 2.50 | 2.82 | 3.13 | 3.44 |
| Weight per doz., lbs. | 17 | 19 | 22 | 32 | 34 | 36 | 42 | 48 |

$1 / 4$ to $1 / 2$-inch, one dozen; $5 / 8$ to $11 / 4$ inches, one-half dozen; $11 / 2$ to 2 inches, one-quarter dozen; $21 / 4$ to $23 / 4$ inches, one-twelfth dozen in a box.

## VANDERMAN'S ASBESTOS LEAD JOINT RUNNER.

A SURE JOINT MAKER.


Cut shows Runner applied
This is a time saver for Plumbers, Water and Gas Companies. It is adapted for soil, water or gas pipes, or a bell pipe of any description where a joint is poured with moulten lead. Red hot lead does not affect it. Directions are sent with each runner.

| Code. | Malmunch | Malnedoc | Malnipud |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | 2 | 3 |
| For pipe, inches. | 2 to 4 | 4 to 6 | 6 to 10 |
| Each | \$1.25 | 1.50 | 2 |



Section of Tinners' Rule. Entire Length, One Yard. No. 101.
This Tinners' Rule is an invaluable article for any practical tinner, and the cut is an exact representation so far as shown; its entire length is 36 inches. The upper line is the ordinary rule graduated by eighths of an inch. The lower line shows at a glance the exact circumference of any cylinder by simply ascertaining the diameter, $i$. $e$, a vessel 5 inches in diameter the rule indicates to be $153 / 4$ inches in circumference.

The reverse side contains much useful information in large, plain figures, regarding the sizes of sixty different articles, such as cans, measures, pails, etc., with straight or flaring sides, flat or pitched top, liquid and dry measure in quarts, gallons and bushels. First is given the dimensions for ressels holding 1 to 5 gallons, liquid measure; second, $1 / 4$ to 2 bushels, dry measure; third, cans with pitched top, 1 to 10 gallons; fourth, cans with flat top, 1 to 200 gallons; fifth, ressels holding 1 to 8 quarts and $1 / 2$ bushel to 3 bushels, dry measure.

Code
Each.
W'eight each, lbs $\qquad$
No. 76 is a folding steel rule, 24 inches long, for pocket use. One side is graduated by sixteenths; on the other side, one edge is graduated by eighths, the other edge has circumference graduations.

Each Rule in a leather case.
$\dagger$ Carried in San Francisco only.

## $\dagger$ COMPASS SAWS.

## CAST STEEL. BEECH HANDLES.

†DOUBLE EDGE SAWS.
THREE SCREW. CAST STEEL. BEECH HANDLES.

$\qquad$
Length, inches
$16 \quad 18$
Per dozen ............................................................................................... $\$ 9.00 \quad 10.00$
Weight per doz., lbs
$9 \quad 91 / 2$

One-third dozen in a box.
†SINGLE EDGE SAWS.
CAST STEEL. BEECH HANDLES.


Code
Maltalent Maltermate Malthusia
Length, inches
14
16
18
Per dozen ............................................................................. $\$ 7.00 \quad 8.00$ 9.00
Weight per doz., lbs
$71 / 2$
$81 / 2$
One-third dozen in a box.

## STAR HACK SAW FRAME.

CAST IRON. JAPAN FINISH.


This frame is so constructed as to face blades in four different directions.
The pins are fast in the frame and cannot drop out. It is a very stiff and desirable frame for 9 -inch blades.
Code ..... Maltibe
Number ..... 4 B
Per dozen ..... $\$ 3.00$
Weight, per dozen, lbs ..... 15One-half dozen in a box.
STAR EXTENSION HACK SAW FRAME.

TEMPERED STEEL. POLISHED AND NICKEL-PLATED. COCOBOLO HANDLE



The best extension frame on the market. It is light and quickly adjusted, having strength in the middle where strength is needed. Adjustable and marked for blades from 6 to 12 inches. The method of straining the blades by simply turning the handle is an improvement over the winged nut.

Note the ring which turns down over the ends of the blades and prevents the latter from falling off the pin when adjusting.
Code ..... Maltick
Number ..... 10
Per dozen ..... $\$ 12.00$
Weight, per dozen, lbs ..... 15One-twelfth dozen in a box.

## HACK SAW BLADES

TEMPERED STEEL. PATENT SET. 24 TEETH TO THE INCH.


| Code | Maltide | Maltiff | Maltigue | Maltill | Maltism |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inches | 8 | 9 | 10 | 11 | 12 |
| Per dozen. | \$0.65 | 70 | . 85 | . 95 | 1.05 |
| Weight, per dozen, lbs | 1/4 | $3 / 8$ | 3/8 | 1/2 | 1/2 |

## †MENLO TINNERS' SHEARS OR SNIPS.

FORGED STEEL. TEMPERED AND HARDENED. BLACK JAPANNED HANDLES.



| Code | Maltornite Maitsters Mambrino Mamilare Mamposter |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | $61 / 2$ | 7 | 8 | 9 | 10 |
| Full length, inches | 15 | 141/4 | 13 | 113/4 | 10 |
| Length of cut, inches | 41/2 | 4 | $31 / 2$ | , | 21/2 |
| Per pair. | \$3.00 | 2.50 | 2.00 | 1.50 | 1.40 |
| Weight per pair, lbs. | 4 | 3 | $21 / 2$ | 2 | $11 / 2$ |

Two pair in a package.

## † MENLO TINNERS' SHEARS OR SNIPS.

FORGED STEEL. TEMPERED AND HARDENED. BLACK JAPANNED HANDLES. FOR CUTTING CIRCLES, IRREGULAR AND STRAIGHT LINES.



| Code | Mamselle | Manacht | Manacled |
| :---: | :---: | :---: | :---: |
| Numbers | 17 | 18 | 19 |
| Full length, inches.. | $14^{1 / 4}$ | 13 | 113/4 |
| Lensth of cut, inches | t | $31 / 2$ | 3 |
| Per pair. | \$2.50 | 2.00 | 1.50 |
| Weight per | 3 | $21 / 2$ | 2 |

Two pairs in a package.
$\dagger$ Carried in San Francisco only.

## $\dagger$ "LYON" SHEARS OR SNIPS.

FORGED HANDLES. STEEL BLADES. FOR CUTTING SCROLLS AND CIRCLES.


| Code | Manalgic | Manamino | Manastaba | Manbind |
| :---: | :---: | :---: | :---: | :---: |
| Numbers.. | 165 | 170 | 180 | 190 |
| Length of cut, inches | $41 / 2$ | 1 | $31 / 2$ | , |
| Per pair | \$3.00 | 2.50 | 2.00 | 1.50 |
| Weight per pair, lbs | 3 | $21 / 2$ | 2 | $11 / 2$ |

One pair in a package.
$\dagger$ P. S. \& W. CO. TINNERS' SHEARS AND SNIPS.

LEFT HAND.



We sometimes have call for Snips for left handed men, but a left hand Snip, as we apply the term, is not intended for a left-handed man.

Confusion often arises as to the meaning of the terms right and left hand, as applied to Snips. Right hand are made like Bench Shears, and left hand opposite. That is, when held in the right hand the lower blade is on the right side of the Shears in right hand Shears, and on the left hand in left hand Shears. Left hand only are shown in the cuts. Left hand Snips are more gelierally used, and are invariably sent unless right hand are ordered.

All Snips stamped "P. S. \& W. Co." are of the highest grade of excellence and fully warranted.

| Code... | Manchart | Manchman | Mancinos | Mancipibo | Mancorne | Mandalot |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | $61 / 2$ | 7 | 8 | 9 | 10 | 11 |
| Length of cut, inches. | $41 / 2$ | 4 | $31 / 2$ | 3 | $21 / 2$ | 2 |
| Per pair | \$3.00 | 2.50 | 2.00 | 1.50 | 1.40 | 1.25 |
| Weight per pair, lbs. | 3 | $21 / 2$ | 2 | $11 / 2$ | 1 | 1/2 |
|  | One pair in a package. |  |  |  |  |  |
|  | $\dagger$ Right Hand Snips. |  |  |  |  |  |
| Code. |  |  |  |  |  | Mandamus |
| Number |  |  |  |  |  | 8 |
| Length of cut, inches. |  |  |  |  |  | $31 / 2$ |
| Per pair............................... .................................................................... \$3.00 |  |  |  |  |  |  |
| Extra Bolts and Nuts |  |  |  |  | .. Each, | , \$0. 20 |

$\dagger$ Carried in San Francisco only.

## $\dagger$ P. S. \& W. CO. TINNERS' SHEARS AND SNIPS.

## GERMAN PATTERN. WITH WIRE CUTTER.



One pair in a package.

## $\dagger$ P. S. \& W. CO. CIRCULAR SHEARS OR SNIPS.

## BEST QUALITY.




One pair in a package.
Extra Bolts and Nuts for Circular Shears or Snips Each, $\$ 0.20$ $\dagger$ Carried in San Francisco only.

## $\dagger$ P. S. \& W. CO. HAWK'S BILL SHEARS.

```
BEST QUALITY.
```



The above cut represents a Curved Shear of real worth and great merit. It is capable of cutting in sheet metal openings of any kind and shape. Letters are easily cut out from sheet metal. They are especially adapted for cutting off the bottoms of metal vessels and for cutting openings in pipes or cylinders of every description, for furnace jackets, thimbles, tee joints, etc. A bottom can be cut from a pint cup or a copper boiler with equal ease.
Code.
Number
Per pair ..... $\$ 3.00$
Weight per pair, lb ..... 1


The combination of a shear and Rotary Hand Crimper will be found serviceable in sheet metal work of all kinds. It will make a 1 -inch crimp on metal as heavy as No. 24 gauge, and will cut metal as heavy as No. 18 gauge.

All working parts are made of steel and duplicate parts can be furnished.
CodeMangaroseLength, inches.10
Per pair ..... $\$ 3.50$
Weight per pair, lbs ..... 2$\dagger$ Carried in San Francisco only.

## DOUBLE-CUTTING SHEARS AND PIPE CRIMPERS.

BEST QUALITY.



These double-cutting Shears combined with a Pipe Crimper are now well known. The blade is pointed and readily inserted in the metal at the point desired to begin the cutting. They are adapted to cutting off the bottoms of pails, cans, etc., and suitable for cutting round or square work. The crimping attachment is designed for crimping any kind of sheet metal pipe, round or square. The parts are interchangeable and the crimping jaws are of steel.
Code.
Number

Per pair ......................................................................................................... \$3. 00
Weight per pair, lbs. ................................................................................................... 2
One pair in a package.

## † DOUBLE-CUTTING SHEARS.



These double-cutting shears are the same as a Number 2, except that they have no crimping attachment and are made porportionately lighter.


## PACKHAM CRIMPING TONGS.


Code
Length, inches ..... $131 / 2$
Per pair ..... \$0.75
Weight per pair, lbs ..... 1

One pair in a package.

## †TINNERS' BENCH SHEARS.

FORGED STEEL


| Code | Mangatori | Mangedour | Mangimel | Mangobam | Mangonite | Mangostan | Manifesto | Manigraph |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | 00 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| Length of cut, inches..... | 12 | $101 / 2$ | 9 | $85 / 8$ | $83 / 8$ | 8 | 7 | 6 |
| Per pair............... | \$13.50 | 12.00 | 8.00 | 7.00 | 6.00 | 5.00 | 4.00 | 3.50 |
| Weight per pair, lbs..... | 37 | 28 | 22 | 18 | 13 | 11 | 9 | 7 |
| One pair in a package. |  |  |  |  |  |  |  |  |

## †TINNERS' ELBOW BENCH SHEARS.

## BEST QUALITY FORGED STEEL.

| Code | Manilargo | Manipolar |
| :---: | :---: | :---: |
| Style | Regular | Extra Heavy |
| Length of cut, inches. | 4 | 6 |
| Per pair. | \$5.25 | 12.00 |
| Weight per pair, lbs | 13 | 25 |

One pair in a package.
†BOLTS AND NUTS FOR BENCH SHEARS.

## OSTER PIPE THREADING MACHINES.



Cut shows No. 200 Hand Machine.


Each set of dies threads two sizes of pipe. Speed of counter-shaft, 100 revolutions per minute. Diameter of tight and loose pulleys, 16 inches.

This machine is not equipped with a cutting-off attachment.

## OSTER PIPE CUTTING AND THREADING MACHINES.



Cut shows No. 203 Hand Machine with Oil Reservoir.

## 203A POWER MACHINE.

Is equipped with automatic oil pump, that lifts the oil from a reservoir within the base and floods the cutters, the oil returning to the reservoir through a strainer.

A ratchet attachment is fixed permanently on these machines, making it possible to operate it by hand without change of equipment.

All gears are protected by guards.
Each machine has an adjustable, swiveled tripod on which to rest the pipe.

Each set of dies threads two sizes of pipe, viz: 1 and $11 / 4,1 \frac{1}{2}$ and $2,21 / 2$ and $3,31 / 2$ and 4 .

Speed of counter-shaft, 120 revolutions per minute.

Diameter of tight and loose pulleys on countershaft, 14 inches.


Cut shows No. 203A Power Machine.


# OSTER PIPE CUTTING AND THREADING MACHINE. 

## WITH EXPANDING DIE HEADS AND AUTOMATIC CUTTING-OFF DEVICE FOR 1 INCH TO 6 INCH PIPE.



The Die Head is a quick opening and closing device, instantly adjustable to variations in setting. Dies can be inserted or removed through the shell of the head and die slots can be cleaned without taking the die heads apart.

The Setting Lever is a principal feature of this machine. It is used in releasing and setting the dies.
Base is cast in one piece and contains the oil reservoir, which can be drained by removing a plug.
Gears are all machine cut and entirely protected from chips or accident. All pinions are cut from solid steel forgings.

The Adjustable Guides which are placed just back of the dies, center and hold the pipe in place while cutting off. One set of guides adjusts to all sizes of pipe.

Cutting-Off Attachment is operated automatically by means of pawl attached to side of machine and is practically an indestructible lathe tool, making a clean cut without burr. The cutter can be removed easily and sharpened on an ordinary grindstone.

Pump is driven by gears. It works while threading left hand as well as right hand.
Ratchet Attachment is permanently fixed on machine, by means of which the machine can be operated by hand without change of equipment.

Vise is self-centering and has gripping jaws of tempered tool steel.
Cone Pulleys have three steps, 10,14 and 16 inches diameter for $31 / 2$-inch belt.
The Counter Shaft has tight and loose pulleys 16 inches diameter for a 4 -inch belt and should be driven $1 \geqslant 0$ revolutions per minute.

Tripod. An adjustable, swiveled tripod on which to rest the pipe is furnished with each machine.
Code Melodoruse
Number ..... 206 A
Complete with 6 sets of R. H. dies, 1 and $1 \frac{1}{4}, 1^{1 / 2}$ and $2,21 / 2$ and $3,31 / 2$ and $4,41 / 2$ and 5 and 6 in. $\$ 400.00$
Extra R. or L. H. dies (per set of 4 pieces) ..... 5.00
Shipping weight, lbs ..... 1500
Shipping measurement, cubic feet ..... $411 / 4$

# BIGNAL \& KEELER PIPE THREADING MACHINE. 

NO. 2 IMPROVED THREADING AND CUTTING-OFF MACHINE.



This machine is designed to meet the demand for a good, strong, quick-acting pipe-threading machine at a reasonable price. It will cut and thread all sizes of pipe from $1 / 4$ to 2 inches. The bed is long and travel of camage ample. The chuck is of the universal type and very strong.

Pipe Dies from $1 / 4$ to 2 -inch are included in the regular equipment, and L. H. dies can be furnished extra. Each set of dies consists of four chasers and will cut two sizes without changing dies.

A Two-Jaw Universal Chuck is placed on the front end of the arbor for gripping and a selfcentering scroll chuck on the rear for supporting and bringing the pipe in line with the dies. This scroll is provided with a knarled rim so that pins and wrenches are not needed.

The Gears are all machine cut from the solid, a feature not found on any other tool of this class and price; besides the main drive is a set of cut spiral gears, very powerful and smooth running. With a set of compound shift gears and a three-step cone pulley, six speeds are obtained, three more than usually found on small tools, and all run in oil completely enclosed but easy to get at for repairs.

The Peerless Die Head and Expanding Dies enables the operator to run the carriage forward or backward as required, without backing out the pipe, which would be necessary with the solid dies. No extra tools are needed in this operation, and no part of the head is removed in changing the dies. One movement of the lever expands the dies and the carriage can be run back.

Cutting-Off Tool and Steady Slides are always in position for use.
An Automatic Oil Pump is placed on each machine, and is outside so that access to piping and plunger is had very readily.

The Bearings are large and well babbitted and all wearing surfaces are large and accurately fitted.

Hand or Belt Power can be used. We furnish a counter-shaft with tight and loose pulleys. Counter-shaft should run 225 revolutions per minute. Diameter of pulley on counter-shaft, 12 inches; width of face, 3 inches.

| Code | Melodosa | Melodoset |
| :---: | :---: | :---: |
| Number. | 2 for Hand Power | 2 for Belt Power |
| Complete with R. H. pipe dies from 1/4 to 2 -inch................... | \$110.00 | 125.00 |
| Shipping weight, lbs.. | 700 | 700 |

Extreme floor space required, $24 \times 36$ inches.

## P. D. Q. C. NO. 2 IMPROVED PIPE CUTTING AND THREADING MACHINE.



This machine was designed especially to meet the demand from Tube Mills, Car Shops and Supply Houses, where large quantities of pipe are cut and threaded. No material has been spared to make it strong in every part. It is convenient, and being equipped with the Peerless Adjustable Die Mechanism and Gripping Chuck of the lever type, a greater amount of work can be accomplished than is possible with any other machine.

The chuck jaws are held in T slots in the short ends of the lever, and adjusted by means of special case hardened screws. They are made of tempered steel, with teeth of $M$ form, and can be easily sharpened without drawing the temper.

All the gears are machine cut from the solid, assuring practically noiseless and steady working.
The dies and cutting off tool are supplied with a constant stream of oil from an automatic oil pump.

Speed of counter-shaft should be 200 revolutions per minute. Size of loose pulleys, 7 -inch face and 14 inches diameter; tight pulleys, 3 -inch face and 14 inches diameter. Distance between die head and chuck, 18 inches. Number of speeds, 6.

Extreme floor space required, $36 \times 70$ inches. Shipping weight, 1800 pounds.

## DUPLEX NO. 6 IMPROVED PIPE CUTTING AND THREADING MACHINE.



Strength, durability and compactness are essential features in any well designed machine, and the No. 6 Duplex Improved is unequaled in this respect. In appearance it is up-to-date, in workmanship first-class, and in material the best the market affords.

This machine is equipped with two chucks, one on each end of the arbor, that are identical with the exception that the jaws on the rear chuck are furnished with a set of grippers on the outside, which will be found very convenient in making up pipe, as the fittings can be screwed up from either end. Each jaw of these chucks is independent and graduated, so that there is no time lost in centering the pipe, as the jaws can be set to their respective sizes.

The Peerless Die mechanism on this machine is one of the features well worth considering, as it is fastened to the die stand, and there are no heavy parts to remove in changing the dies. By revolving the cam ring toward the right the numbered holes are placed directly above the dies and with a slight pressure the dies can be removed and quickly replaced by another set.

Each machine is equipped with an automatic oil pump, which keeps the dies and cutting knife well flushed with oil.
Code
Machine complete with one set each ( 6 pieces to the set), adjustable expanding R. H. diesfor $11 / 4$ to 6 -inch pipe, counter-shaft and wrench.$\$ 1000.00$
Machine as above described, with engine drive, less counter-shaft, complete. ..... 1100.00
Extra dies, R. or L. H., for pipe or casing (per set of 6 pieces). ..... 15.00
Extra cutting knives, each. ..... 75

Speed of counter-shaft should be 250 revolutions per minute. Size of loose pulley, 8 -inch face and 16 -inch diameter. Size of tight pulleys, $t$-inch face and 16 -inch diameter. Distance between die head and chuck, $263 / 4$ inches.

## IMPROVED "DUPLEX" PIPE STOCKS AND DIES.

Hart's Patent.

RIGHT HAND DIES. BOTH GUIDES AND DIES INSTANTLY ADJUSTABLE.


Cut shows style of Nos. 2, 3 and $31 / 2$.


Cut shows style of Nos. 4 and 5.

## Without Cut-0ff.

| Code | Mannabred | Mannerist |  | Mannikin |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | $\begin{gathered} \stackrel{2}{1 / 4}, 3 / 8,1 / 2,3 / 4,1,11 / 4 \\ \$ 17.00 \end{gathered}$ | $\stackrel{3}{1,1^{1 / 4}, 1 / 2,2}$ |  | 31/ |  |
| Pipe sizes each tool will thread and cut, inc |  |  |  | 1/2, 3/4, 1, | 4, 11/2, 2 |
| Each complete.. |  |  | 2.00 |  |  |
| Weight each, lbs.. | 20 |  | 25 |  |  |
| Shipping measurement, cubic feet | 5/12 |  | 1/2 |  |  |
|  | With Cut-Qff. |  |  |  |  |
| Code.. |  | Mantecado | Mantedore | Manteleri | Manterose |
| Number |  | 3 | $31 / 2$ | 4 | $\dagger$ |
| Each. |  | \$25.00 | 28.00 | 45.00 | 60.00 |
| Weight each, lbs |  | 26 | 27 | 58 | 72 |
| Shipping measurement, cubic feet. |  | 1/2 | 1/2 | 1/1/2 | 1/1/2 |

One in a case.
Will be sent with Cut-off unless otherwise ordered.


Left Hand Dies can be furnished at same price as Right Hand Dies.
$\dagger$ Extra Knives or Cut-Off Tools.

| Code | Maritorne | Marketer | Marline | Marmardet | Marmarzum | Marmell |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | 3 | $31 / 2$ | 4 | 5 | S | 9 |
| Each. | \$0.40 | . 40 | . 50 | . 50 | . 50 | . 75 |

$\dagger$ Carried in San Francisco only.

# $\dagger$ DUPLEX RATCHET DIE STOCKS AND DIES WITH CUT-OFF. 

Hart's patent.

```
WITH RIGHT HAND DIES AND CUT-OFF.
```




One in a case.

## $\dagger$ Extra Dies. Right Hand.



| Sizes Each Set Cuts, Inches. | Code. | Per Set. | Code. | Per Set. |
| :---: | :---: | :---: | :---: | :---: |
| 1 and 11/4. | Masturt........... $\$ 2.00$Masuroll........ 2.00 |  | Matabuzz........ $\$ 4.00$ <br> Matacolon....... 4.00 |  |
| $11 / 2$ and 2. |  |  |  |  |
| $21 / 2$ and 3 . |  |  |  |  |
| $31 / 2$ and 4. |  |  |  |  |

Left Hand Dies can be furnished at same price as Right Hand Dies.
$\dagger$ Carried in San Francisco only.

## ARMSTRONG'S ADJUSTABLE STOCKS AND DIES.

WITH RIGHT HAND DIES, FOR THREADING PIPE.



| Code...... | Matadour | Matahhmo |
| :---: | :---: | :---: |
| Numbers | 2 | 3 |
| Pipe sizes of dies, inches. | 1/4, 3/8, 1/2, 3/4, 1 | 1, 11/4, 13/4, 2 |
| Each.. | \$12.00 | 24.00 |
| Weight each, lbs | 17 | 40 |

One set in a box.
Right and Left Hand Extra Dies. No. 2 Stock.

| Code, right hand | Mataperro | Matavondu | Matenmake | Matercule | Maternida | Maternote |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code, left hand.. | Mathanid | Matigend | Matilicad | Matiscor | Matizado | Matlock |
| Inch | 1/8 | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 |
| Per set | \$1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |

$\dagger$ Right and Left Hand Extra Dies. No. 3 Stock.

| Code, right hand | Matarcurd | Matricart | Matrimode | Matronal |
| :---: | :---: | :---: | :---: | :---: |
| Code, left hand. | Matserve | Matshame | Mattamost | Mattenborn |
| Inches | 1 | 11/4 | 11/2 | 2 |
| Per set | \$4.00 | 4.00 | 4.00 | 4.00 |

$\dagger$ Extra Bushings. No. 2 Stock.

| Code | Mattgelt | Matulare | Maturame | Maturando | Maudiron | Maudisson |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inch | 1/8 | 1/4 | 3/8 | 1/2 | $3 / 4$ | 1 |
| Each | \$0.25 | 25 | 25 | 25 | 25 | 25 |

## $\dagger$ Extra Bushings. No. 3 Stock.

| Code.. | Mauerbrut | Mauerkron | Mauerspat | Maugrape |
| :---: | :---: | :---: | :---: | :---: |
| Inches | 1 | 11/4 | $11 / 2$ | 2 |
| Each | \$0.50 | . 50 | . 50 | . 50 |
|  |  |  |  |  |

$\dagger$ "HOLLAND'S" PIPE STOCKS AND DIES.



## HOLLAND'S STOCKS ONLY.



Loose.
$\dagger$ WALWORTH'S PIPE STOCKS AND DIES.
WITH RIGHT HAND DIES AND GUIDES.


Leader Screws used on No. 2 Stocks.
One in a box.
$\dagger$ Extras For Walworth Stocks.

| Each | Code |
| ---: | :--- |
| $\$ 0.25$ | Mausoleum |
| .50 | Mavortica |
| .75 | Mayoret |


| Number $\mathbf{2}$ |  |
| :--- | ---: |
| $\quad$ Part | Each |
| Plate Screw | $\$ 0.25$ |
| Cap Plate | .75 |
| Leader Screw | 1.50 |

## †NYE PIPE DIES.

## MADE OF FINEST TOOL STEEL CAREFULLY HARDENED. ABSOLUTELY GUARANTEED.



Right Hand Dies for No. 1 Stocks. Size of Block, $23 / 8 \times 23 / 8 \times 3 / 4$ inches.

| Code | Mazzabaft | Mazzalino | Mazzamur | Mazzanon | Mazzapall | Mazzaquin |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pipe size, inch | 1/8 | 1/4 | $3 / 8$ | 1/2 | $3 / 4$ | 1 |
| Each | \$2.00 | 2.50 | 2.50 | 3.00 | 3.00 | 4.00 |

Right Hand Dies for No. 2 Stocks. Size of Block, $4 \times 4 \times 7 / 8$ inches.

| Code | Mazzedux | Mazzegog | Mazzeheur | Mazzejus* |
| :---: | :---: | :---: | :---: | :---: |
| Pipe size, inch | 1 | 11/4 | 11/2 | 2 |
| Each | \$4.50 | 4.50 | 5.00 | 5.00 |

In principle the Nye Die is a radical departure from all heretofore accepted types of pipethreading Dies. The small number of cutting teeth and their peculiar arrangement, is such that the friction generated in cutting a thread is 75 per cent less than any other die, and consequently the power required to cut a thread is reduced proportionately. The construction is such that behind the first set of teeth there is only one tooth in each full turn of the thread. This allows free play of the oil around each tooth and also prevents the severe binding which is so characteristic of all other Dies. The thread cut with this Die is clear and perfect and equal in every respect to the finest machine made thread. It is impossible tr injure either the thread or the Die in backing off.

A boy can easily thread any 2 -inch steel pipe with this Die.

## †HOLLAND'S RATCHET PIPE STOCKS.

## WITH SHIELDS COVERING RATCHET WHEELS.



| Code | Mazapard | Mazzacort |
| :---: | :---: | :---: |
| Numbers | 1 | 2 |
| Dimensions of dies, inches | $21 / 2 \times 21 / 2 \times 3 / 4$ | 4x4x7/8 |
| Pipe sizes of dies, inches | 1/4, 3/8, 1/2, 3/4, 1 | 1,1/4,11/2,2 |
| Length, inches | 20 |  |
| Each | \$9.00 | 13.00 |
| Weight each, lbs. | 7 | 21 |

Price does not include dies.

## HOLLAND'S PIPE DIES.

CUTTERS ARE MADE OF THE HIGHEST GRADE JESSOP STEEL.


Right or Left Hand Dies. For No. I Stocks $21 / 2 \times 2 \frac{1}{2} \times 3 / 4$ Inches.

| Code, rig | Meacular | Meanders | Meatoribo | Mecadura | Meconopsi | Medelade |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code, left hand | Mediador | Medianist | Mediatize | Medicabel | Medicanto | Medicatrix |
| Pipe size, inch | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Each | \$2.00 | 2.00 | 2.00 | 2.00 . | 2.00 | 2.00 |

Right or Left Hand Dies. For No. 2 Stocks $4 \times 4 x 7 / 8$ Inches.

| Code, right hand | Mediolor | Meditamo | Meditator | Medontida | Medrabamo |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code, left hand.. | Medullate | Medusia | Meelkite | Meerballe | Meerdiste |
| Pipe size, inches | 3/4 | 1 | 1/4/4 | $11 / 2$ | 2 |
| Each | \$3.50 | 3.50 | 3.50 | 3.50 | 3.50 |

We always ship Right Hand Dies unless Left Hand are ordered.


## †BUSHINGS OR GUIDES.

## For No. I Stocks.

| Code | Meerhund | Mefitism |
| :---: | :---: | :---: |
| Pipe size, inch | 1/8 | 1/4 |
|  | \$0.35 | . 35 |


| Code | Megalense | Megalith | Meidenhed | Meiloupe |
| :---: | :---: | :---: | :---: | :---: |
| Pipe size, inch | 3/8 | 1/2 | 3/4 | 1 |
| Each.. | \$0.35 | . 35 | 35 | 35 |

For No. 2 Stocks.

| Code | Meissel | Mejicano | Mejoramo | Melampit | Melamtheme |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pipe size, inches | 3/4 | 1 | 11/4 | 11/2 | 2 |
| Each | \$0.60 | . 60 | . 60 | . 60 | . 60 |

$\dagger$ PIPE TAPS.

```
RIGHT AND LEFT HAND.
```



| Code, right hand..Melanchro | Melanfile | Melangion | Melanure | Melardine | Melastome | Melchiade | Me,dekar | Melenudo |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code, left hand..Meletide | Meliboca | Melifique | Meliorate |  | Meliphage | Melisford | Melizomi | Melkacht | Melkbade |
| Size pipe, inches.. | $1 / 8$ | $1 / 4$ | $3 / 8$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| Each ............... $\$ 1.12$ | 1.25 | 1.50 | 1.87 | 2.50 | 3.12 | 3.75 | 4.62 | 6.25 |  |
| Weight each, lbs.. | $1 / 16$ | $1 / 8$ | $1 / 4$ | $3 / 8$ | $3 / 4$ | $11 / 4$ | 2 | $21 / 2$ | 4 |

Pipe Taps are sent with Right Hand Threads unless Left Hand is specified.
One in a box.

## †PIPE REAMERS.



| Code $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | Melkdiste | Melkgeite | Melkschut | Mellicrat | Mellifero | Mellowed | Melocarpo | Melodian |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size pipe, inches $\ldots \ldots \ldots$. | $1 / 4$ | $3 / 8$ | $1 / 2$ | $3 / 4$ | $\mathbf{1}$ | $\mathbf{1} 1 / 4$ | $\mathbf{1} 1 / 2$ | $\mathbf{2}$ |
| Each $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ | $\$ 1.25$ | 1.50 | 1.87 | 2.50 | 3.12 | 3.75 | 4.62 | 6.25 |

Sizes of twist drills to be used in boring holes to be reamed with pipe reamer and threaded with pipe tap are as follows:-

| Pipe tap, inches | 1/8 | $1 / 4$ | , | 1/2 | 3/4 | 1 | $11 / 4$ | $11 / 2$ | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Drill diameter, inches | 21/64 | 29/64 | : $9 / 3$ | 23/32 | $15 / 16$ | 13/16 | 15/32 | $123 / 32$ | 23/5 |

$\dagger$ Carried in San Francisco only.

## NEW ECLIPSE TAPPING MACHINE.

FOR TAPPING WATER MAINS OR OTHER PIPES UNDER PRESSURE.


Every Machine tested to 600 pounds to the square inch and guaranteed.
These Machines are made of the best bronze metal. The saddles are made of malleable iron and will not break. Taps on the top or side or any angle desired.

| Code | Meloditte | Melodiano |
| :---: | :---: | :---: |
| Numbers | 1 | 2 |
| Taps, inches | $3 / 8,1 / 2,3 / 4$ and 1 | 1, $11 / 4,11 / 2$ and 2 |
| Each complete. | \$100.00 | 150.00 |
| Weight each, lbs | 25 | 35 |

The No. 2 Machine will tap all the small sizes by getting the taps and mandrels extra.
Price List of Extra Tools.


## Directions for Operating Payne's Eclipse Tapping Machine.

Screw the corporation cock 13 into the mandrel 12 . Then with handle 10 swing the crane 11 over the opening in bottom of machine and screw mandrel 12 into the crane 11. Then swing the crane around into the recess, as shown in above cut, and fold up handle 10 . Put the combined tapand drill 4 into the machine. Put saddle 14 into the main and set the machine on the saddle. Pass the ends of the chain through the harps 9 and tighten chain by means of tightening bolts 8. Put the ratchet 3 on the drill 4 and swing the feed yoke 2 to position and tighten up feed screw 1. After having drilled and tapped the hole, draw tap 4 into the machine through stuffing-box 5 , open the handle 10 and swing crane around so that mandrel 12 is directly under the tap and drill 4 , push down on the tap, screw it into the mandrel and continue until it unscrews mandrel out of crane 11 . Then by means of the ratchet 3 , screw cock into the main, loosen chains, take off machine and unscrew tapand mandrel from cock.

## "CENTURY" SERVICE CLAMP TAPPING MACHINE.



These machines are designed for use wherever the thickness of the pipe to be tapped will not safely hold up a stop cock or service pipe without the support of a service clamp or saddle. With this machine taps can be made without loss for hot or cold water, gas or oil service. The machine will drill pipes for $1 / 2,5 / 8,3 / 4$ and 1 -inch stop cocks upon any size pipe. When used without the stuffing-box, tools up to 18 inches in length can be used, and it will tap up to 3 -inch.
Code. Melodoor
Macnıne, complete with Ratchet, $1 / 2,5 / 8,3 / 4$ and 1-inch Drills and Stuffing-Boxes........... $\$ 40.00$
Shipping weight, lbs.

Packed in a special wood compartment case.

Unless otherwise specified, Iron Pipe Thread on the lower end of Stuffing-Boxes, and Chain for 12 -inch Pipe, will be furnished upon all orders. Other threads can be furnished upon specification.

## H. M. \& S. TELEGRAPH FIREPOTS.

## REFINED SMOOTH STEEL.

Code.$\$ 5.60$Weight each, lbs. ..... $41 / 2$
H. M. \& S. TINNERS' FIRE POTS.
REFINED SMOOTH STEEL.
Code ..... Gelibatur
Diameter, inches ..... $73 / 4$
Height, inches. ..... 4.50
Weight each, lbs. ..... $71 / 2$


## H. M. \& S. PLUMBERS' FIRE POTS.

## REFINED SMOOTH STEEL. HEAVY.

Code.
Top diameter, inche
${ }^{r}$ Geliacose

Height, inches11

Each14
$\$ 5.00$Weight each, lbs
$\dagger$ Carried in San Francisco only.



## †PRIMUS PLUMBERS' COMBINATION FURNACES.

TWO BURNERS. CAST IRON BASE. SHEET STEEL HOOD.

Can be used in open air, having a wind Guard which perfectly protects the flame. Will melt and heat irons at the same time. Hood is detachable. The Lamp may be removed from the frame for separate use. With 6 -inch Pot.

One and one-half quarts of oil will operate both burners for three hours.

| Code | Gondager |
| :---: | :---: |
| Number | 25 |
| Capacity, quarts | $11 / 2$ |
| Height, inches. | 191/2 |
| Base, inches | 9 |
| Each.. | \$6.50 |
| Weight per crate, lbs | 20 |
| Shipping measurement per crate, cubic feet.. | 1\% |
| One in a crate. |  |

## PRIMUS SOLDERING FURNACES.

TWU BURNERS. CAST IRON HOOD.
IRON BASE FOR INDOOR USE.
Double Hood is open clear through, thereby permitting the introduction of a 2 -inch pipe of any length. The Single Hood Furnace has small opening at top with a cover, to permit use of metal Pot.

| Code. | Gondirast | Gondkiste |
| :---: | :---: | :---: |
| Numbers | 11 | 11 |
| Style of hood ..................... | Single | Double |
| Capacity, quarts................. | $11 / 2$ | $11 / 2$ |
| Height, inches. | 16 | 16 |
| Base, inches ...................... | 9 | 9 |
| Each | \$10.00 | 10.50 |
| Weight per crate, lbs. | 20 | 22 |
| Shipping measurement per rate, $\mathrm{cu} . \mathrm{ft}$. | 11/12 | 81/x |

One in a crate.
$\dagger$ Carried in San Francisco only.

# GASOLINE FIRE POTS AND TORCHES. CLAYTON \& LAMBERT FIRE POTS. 

BRONZE METAL BURNERS WITH CLEAN-OUT PLUGS.
PERFECT AND DURABLE PUMPS.
REMOVABLE HOODS.
2
Diameter of oil tank, inches. ..... 83/4
Height over all, inches ..... 11 1/2
Each ..... $\$ 6.00$
Shipping weight, lbs ..... $121 / 2$
Shipping measure, cubic foot.
Shipping measure, cubic foot. ..... 5 ..... 5
One in a case.


## †CLAYTON \& LAMBERT FIRE POTS.

SAME AS No. 1 EXCEPT THAT IT IS SMALLER.
Code
Number Goorlepe 5
Capacity of oil tank, quarts.................................................................1/2
Diameter of oil tank, inches. $73 / 4$
Height over all, inches............................................................. $11 / 2$
Each. \$4.50
Shipping weight, lbs........................................................................ 12
Shipping measure, cubic foot............
Shipping measure, cubic foot. One in a case.

## CLAYTON \& LAMBERT FIRE POTS.

SAME AS No. 1 EXCEPT THAT IT IS SMALL ENOUGH TO BE PACKED IN A TOOL BAG.
Code. Goornous
Number
Capacity of oil tank, quart.................................................................... 1
Diameter of oil tank, inches.$61 / 4$
Height over all, inches. ..... $91 / 4$
Each. ..... $\$ 4.00$
Shipping weight, lbs. ..... 9
Shipping measure, cubic foot. ..... 5/12One in a case.
CLAYTON \& LAMBERT FIRE POTS.
SAME AS No. 1 EXCEPT THAT IT HAS TWO BURNERS.
Code.
Capacity of oil tank, quarts ..... 2
Diameter of oil tank, inches. ..... $83 / 4$
Height over all, inches ..... $111 / 2$
Each. ..... $\$ 8.00$
Shipping weight, lbs. ..... 15
Shipping measure, cubic foot ..... 5/6


## CLAYTON \& LAMBERT FIRE POTS.

```
STRONG AND DURABLE. EXTRA HEAVY PIPE COILS.
    NEEDLE AIR VALVES. BRASS AIR PUMPS.
            IMPROVED FEED VALVES.
```

| Code | Goorsmit |
| :---: | :---: |
| Number | 20 |
| Capacity of oil tank, quarts. | 2 |
| Diameter of oil tank, inches.. | $81 / 2$ |
| Height over all, inches. | 18 |
| Each. | \$3.25 |
| Shipping weight, lbs. | 13 |
| Shipping measurement, cubic foot. | $2 / 3$ |
| One in a case |  |

# †CLAYTON \& LAMBERT TORCHES. 


POLISHED BRASS. MADE OF No. 18 BRASS. ..... BRASSAIR PUMPS, SERVE AS HANDLES. MAKESA FINE NEEDLE FLAME.
Code ..... Goorwasp
Number ..... $1 / 2$
Capacity, quart ..... $33 / 4$
Height, inches ..... 53/4
Each. ..... $\$ 2.00$
Shipping weight, lbs ..... $13 / 4$
Shipping measurement, cubic foot ..... $1 / \pm 6$One in a case.
CLAYTON \& LAMBERT TORCHES.


## CLAYTON \& LAMBERT TORCHES.

POLISHED BRASS. WITH SMALL AND LARGE BURNER.
Code ..... GootsankNumber
5
Capacity, quart ..... 1
Diameter, inches ..... $5^{1 / 2}$
Height, inches ..... 10
Each ..... $\$ 3.00$
Shipping weight, lbs ..... 5
Shipping measure, cubic foot. ..... 1/3One in a case.

## CLAYTON \& LAMBERT TORCHES.

POLISHED BRASS. SEAMLESS. IMPROVED BURNERS
AND SWIVELS. BRASS AIR PUMPS. WILL
NOT BLOW OUT.

| Cod | Goorspane |
| :---: | :---: |
| Number | 1 |
| Capacity, quart. | 1 |
| Diameter, inches. | 53/4 |
| Height, inches.. | 9 |
| Each. | \$3.00 |
| Shipping weight, | $51 / 2$ |
| Shipping measure | 1/3 |

## CLAYTON \& LAMBERT TORCHES.

POLISHED BRASS. SEAMLESS. BRASS AIR PUMPS INHANDLES. ROUND BURNERS, WITH WOOD HANDLES.POWERFUL, STRONG AND ECONOMICAL.Capacity, quart ..... 1
Diameter, inches. ..... $53 / 4$
9
Height, inches
$\$ 2.25$
Each
5
Shipping weight, lbs
1/3
Shipping measure, cubic foot



## CLAYTON \& LAMBERT TORCHES.

POLISHED BRASS. SEAMLESS. BRASS AIR PUMPS IN HANDLES. HOOK ON BURNER FOR HOLDING SOLDERING iRONS.
Code.Number17
Capacity, quart ..... 1
Diameter, inches ..... $53 / 4$
Height, inches ..... 10
Each ..... $\$ 2.50$
Shipping weight, lbs ..... $51 / 4$
Shipping measure, cubic feet. ..... 1/3One in a case.
CLAYTON \& LAMBERT TORCHES.
POLISHED BRASS. SAME AS No. 16, EXCEPT THAT IT IS SMALLER.
Code. Gootstow
Number ..... 18
Capacity, quart. ..... 45
Height, inches. ..... 8
Each ..... \$2.00
Shipping weight, lbs ..... $31 / 2$
Shipping measure, cubic foot ..... 1/6One in a case.
†CLAYTON \& LAMBERT TORCHES.
NICKEL.PLATED BRASS. FOR ALCOHOL OR GASOLINE. ADJUSTABLE BLOW PIPES. SCREW CAP
CodeGootsvelk
Number ..... 11
Diameter, inch.
7/8
7/8
Length, inches. ..... 6
Each ..... $\$ 0.75$
Weight each, lb ..... 1/4
One in a box.
†CLAYTON \& LAMBERT TORCHES.
POLISHED BRASS. FOR ALCOHOL OR GASOLINE. AIR BLAST PASSES THROUGH A CHAMBER CHARGED WITH GAS WHICH MAKES A MUCH STRONGER FIRE THAN CAN BE HAD IN ANY OTHER WAY. SCREW CAPS
Code. ..... Gorably ..... 14
Number
Number
Diameter, inches ..... 13/4
Length, inches ..... $61 / 2$
Each ..... $\$ 1.00$
Weight each, lb. ..... 1

## †VULCAN TORCHES.

POLISHED BRASS. WOOD HANDLES SCREW ON IN TWO POSITIONS. FOR GASOLINE. NO WICKS.

Code Goraneck
Diameter, inches ..... $33 / 8$
Height of oil tank, inches ..... 2
Each. ..... $\$ 4.00$
$\dagger$ Carried in San Francisco only.

## REPAIRS FOR FIRE POTS.




Air Valve
25c. by mail 30c


FILLER.
25c, by mail 30c


Swivel. 50c, by mail 55c

| Numbers of Fire Pots | 1 | 5 | 6 | 15 |
| :---: | :---: | :---: | :---: | :---: |
| Base complete with Burner | \$4.00 | 3.00 | 3.00 | 6.00 |
| Code | Gorbolete | Gorbonica | Gorboritas | Gorbotamo |
| Top Section | \$2.00 | 1.50 | 1.00 | 2.00 |
| Code | Gorbotase | Gordaler | Gordank | Gordhake |
| Burner only. | \$1.50 | 1.50 | 1.50 | 1.50 |
| Code. | Gordman | Gordpaper | Gordrage | Gordzang |
| Swivel | \$0.50 | . 50 | . 50 | . 50 |
| Code | Gorealis | Goreasm | Goreotid | Gorghise |
| Filler Plug | \$0.15 | . 15 | . 15 | . 15 |
| Code | Gorghette | Gorgodil | Gorgolane | Gorgonate |
| Filler Collar | \$0.10 | . 10 | . 10 | . 10 |
| Code | Gorgonzolo | Gorlabor | Gormonie | Gornoyer |
| Pump | \$0.40 | . 40 | . 40 | 40 |
| Code | Gornpute | Gorracat | Gorrachic | Gorratell |
| Pump Collar | \$0.10 | . 10 | . 10 | . 10 |
| Code | Gorregul | Gorricane | Gorrimust | Gorsdorf |
| Drip Cup or Hood. | \$0.25 | . 25 | . 25 | . 25 |
| Code | Gorsippe | Gorstade | Gorstkler | Gorstkoop |
| Needle and Stuffing-box | \$0.25 | . 25 | 25 | 25 |
| Code. | Gorstlapp | Gorstmete | Gorstpin | Gorstrem |

## COIL FIRE POT REPAIRS.

| Burner $\qquad$ EACH | Connecting Pipe $\qquad$ <br> EACH <br> .08 C |  | $\begin{aligned} & \text { Coil } \\ & \text { Cup } \\ & \text { Ho } \\ & 0 . \\ & \text { EACH } \\ & .254 \end{aligned}$ | EACH |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Fiiler } \\ \text { Plug } \\ 0 \\ \text { EACH } \\ \text { IOC } \end{gathered}$ |  | Handle | Nuts <br> (0) (0) <br> Nol NozERCH <br> O. |  |
|  | Plug | Reservoir | Bulb |  |
|  | $\begin{gathered} \text { Tee } \\ 0 \\ \hline 6 A C H \\ \hline 04 \% \end{gathered}$ |  | $\begin{gathered} \text { Upright } \\ \text { But } \\ \text { EACH } \\ .064 \\ \hline \end{gathered}$ | Wirefor Coil <br> xesseres <br> EACH <br> .054 |


| Name of Part. | Price. | Code. | Name of Part. | Price. | Code. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Burner. | \$0.10 | Gorstroke | Plug. | \$0.04 | Gosporic |
| Connecting Pipe. | . 08 | Gorstwier | No. 20 Reservoir | 1.50 | Gossage |
| Coil... | 25 | Gorzegum | Bulb . | 20 | Gossoner |
| Coil Cup. | . 25 | Gorzolete | No. 1 Shield. | . 35 | Gostange |
| Ell. | . 04 | Gosarde | No. 2 Shield. | . 35 | Gostello |
| Filler Plug | . 10 | Goschdruf | No. 3 Shield. | 75 | Gostezam |
| Handle Ear | . 04 | Goschgood | Tee... | . 04 | Gostezase |
| Handle. | . 15 | Goschloot | Top Plate | 15 | Gostriche |
| No. 1 Nut.. | . 01 | Goschslag | Upright. | . 06 | Goswell |
| No. 2 Nut.. | . 01 | Goschwind | Wire for Coil | . 05 | Gotanike |
| Valve... | . 30 | Gosorim | Pump............... | 40 | Gotavan |
| Air Valve. | . 25 | Gospeler |  |  |  |

When repair parts are sent by mail postage will be charged.

## TORCH REPAIRS.

| Numbers of Torches | 1 | 2 | 3 - | 5 | 6 | 16 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Burner | \$1.50 | 1.25 | 1.25 | 1.75 | 1.40 | 1.25 | 1.25 |
| Code | Gotelheir | Gotellone | Gotenlaf | Goterblom | Goterdeg | Goterend | Gotergeba |
| Filler Plug | \$0.15 | . 15 | . 15 | . 15 | . 15 | . 15 | . 15 |
| Code | Goterhust | Gotermark | Goterpote | Goterwag | Goterzar | Gothic | Gothrope |
| Filler Collar | \$0.10 | . 10 | . 10 | . 10 | . 10 | . 10 | . 10 |
| Code | Gotorale | Gotrobat | Gotryone | Gotsend | Gottegon | Gottelem | Gottelore |
| Burner Tube | \$..... | . 20 | . 20 | . 20 | . 20 | . 20 | 20 |
| Code | Gotthame | Gottschur | Gouboul | Gouchard | Gouchasse | Gouchero | Goudante |
| Pump. | \$0.40 | . 40 | . 40 | . 40 | . 40 | . 40 | 40 |
| Code | Goudelore | Goudinet | Gouffare | Gouganest | Goulange | Goulever | Gouloure |
| Pump Collar | \$0.10 | . 10 | . 10 | . 10 | . 10 | ...... |  |
| Code | Gourbond | Gourbote | Gourdalo | Gourmand | Gourrell | Goursicat | Gousiner |
| Tanks only. | \$1.00 | 1.00 | . 75 | 1.00 | 1.00 | 1.00 | 1.00 |
| Code. | Goussart | Goutadex | Goutbore | Goutkoge | Gouttan | Gouvet | ouz |

When repair parts are sent by mail postage will be charged.


## PRIMUS BRAZIERS' TORCHES.

POLISHED BRASS. FOR BURNING COAL OIL.
The most powerful Torches made, producing an intense steady heat of 2600 degrees F. Capable of melting copper wire $5 / 16$ of an inch thick in the open flame. Consumes $1 / 5$ quart of oil per hour. Will burn in any position.

| Code | Gombastic | Gombica |
| :---: | :---: | :---: |
| Numbers | 70 | 71 |
| Capacity, pints | 1 | 2 |
| Diameter, inches | $33 / 4$ | $43 / 4$ |
| Height, inches ................ | $93 / 8$ | $97 / 8$ |
| Extreme bottom, inches...... | 83/4 | 9 |
| Each | \$4.50 | 5.50 |
| Weight per case, lbs | 27 | 30 |
| Shipping measurement per |  |  |
| case, cu. ft. | 11/4 | 13/4 |

Six in a case.

## † PRIMUS BRAZIERS' TORCHES.

POLISHED BRASS. FOR BURNING COAL OIL.

The most powerful Torches made, producing an intense steady heat of 2600 degrees F . Capable of melting copper wire $5 / 16$ of an inch thick in the open flame. Consumes $1 / 5$ quart of oil per hour. Will burn in any position.

| Code. | Gombidot | Gombihul |
| :---: | :---: | :---: |
| Numbers | 72 | 73 |
| Capacity, pints | 1 | 2 |
| Diameter, inches | $33 / 4$ | $43 / 4$ |
| Height, inches. | $111 / 2$ | $113 / 4$ |
| Extreme width, inches | 7 | 8 |
| Each | \$4.50 | 5.50 |
| Weight per case, lbs. | 27 | 30 |
| Shipping measurement per case, cu. ft. | $11 / 4$ | $13 / 4$ | Six in a case.

## $\dagger$ PRIMUS PAINTERS' TORCHES.

## POLISHED BRASS. FOR BURNING COAL OIL. <br> Will stand wind. Will produce heat of 2100 degrees $F$. Will consume $x / 5$ quart of oil per hour. Will burn in any position. <br> Code. <br> Gombilate Gombilon <br> $\begin{array}{llll}\text { Numbers } . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~ & 40 & 41 \\ \text { Capacity, pints........... }\end{array}$ <br> Diameter, inches................. $35 / 8$ 4 <br> $\begin{array}{llll}\text { Height, inches........................... } & 87 / 8 & 9 \\ 83 / 8 & \end{array}$ <br> $\begin{array}{lll}\text { Extreme bottom, inches........ } & 83 / 8 & 9\end{array}$ <br> Each.................................... \$4.50 5.50 <br> Weight per case, lbs.............. 27 30 <br> Shipping measurement per <br> case, cubic ft................ 11/4 13/4 <br> Six in a case. <br> †PRIMUS PAINTERS' TORCHES.

POLISHED BRASS. FOR BURNING COAL OIL.
Will stand wind. Will produce heat of 2100 degrees F . Will consume $1 / 5$ quart of oil per hour. Will burn in any position.

| Code | Gombutt | Gombuzell |
| :---: | :---: | :---: |
| Numbers | 42 | 43 |
| Capacity, pints.. | 1 | 2 |
| Diameter, inches | $35 / 8$ | 45/8 |
| Height, inches | 93/4 | $101 / 2$ |
| Extreme width at bottom, inches. | $83 / 8$ | 9 |
| Each | \$4.50 | 5.50 |
| Weight per case, lbs. | 27 | 30 |
| Shipping measurement per case, cubic ft. | 11/4 | $13 / 4$ |

## PRIMUS PAINTERS' TORCHES.

POLISHED BRASS. FOR BURNING COAL OIL.
Will stand wind. Will produce heat of 2100 degrees $F$. Will consume $1 / 5$ quart of oil per hour. Will burn in any position.
Code.
Numbers
Capacity, pints........................
Diameter, inches................................. $35 / 8$ 45
Height inches $71 / 2 \quad \pm 8$
Extreme width, inches.............
$91 / 2$
Each
$\$ \pm .50$
5.50

Weight per case, lbs 30

33
Shipping measurement per
case, cubic ft $\qquad$ $11 / 4 \quad 13 / 4$
Six in a case.
$\dagger$ Carried in San Francisco only.

## PRIMUS GIANT HEATERS.

WITH No. 252 BURNERS.



CUT SHOWS No. 33.

For any use requiring intense heat production in a limited space, this apparatus is particularly available. It is now being successfully used for a large variety of purposes, among which may be mentioned: The operation of oil and hot-air engines; heating branding irons; melting lead; heating steam tables; boiling large quantities of liquids; heating hot water urns; in the dental profession for melting gold, vulcanizing rubber, and heating or boiling wax; in the medical profession for operating "Formaldehyde " gas generators ; in hospitals for sterilizing and other purposes ; and by some of the leading New York newspapers for "Lino- type" machines.

It is powerful, compact, odorless and safe.
The Giant Heater is made regularly in $1,2,3,4,6$ and 8 burners, and will be made of larger size with any desired number of burners upon special order.

It can be fitted as desired with "Original Primus," or "Noiseless" burners, either of which gives a broad, flaring flame-or with "Industrial" burner, which gives a long, upright flame.

| Code | Gomgate | Gomilcare | Gompress | Gonament | Gondade |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | 7 | 31 | 32 | 33 | 34 |
| Number of burners | 2 | 3 | 4 | 6 | 8 |
| Capacity, quarts. | 11/2 | 3 | 4 | 5 | 5 |
| Height, inches . | $93 / 4$ | 123/8 | 121/4 | 123/4 | $123 / 4$ |
| Height of reservoir, inches.................................... | $37 / 8$ | $51 / 8$ | $51 / 8$ | $51 / 2$ | $51 / 2$ |
| Diameter of base, inches.. | $67 / 8$ | 75/8 | $81 / 2$ | $97 / 8$ | 97/s |
| Diameter of burner group, inches | 35/8 | $53 / 8$ | 67/8 | 65/8 | 65\% |
| Each. | \$5.50 | 10.50 | 12.00 | 15.00 | 18.00 |
| Weight per case, lbs........................................... | 8 | $111 / 2$ | 13 | 15 | $151 / 2$ |
| Shipping measurement per case, cubic feet ................ | 5/12 | 2/3 | 5/6 | 1 | 1 |

One in a case.

## $\dagger$ DIAMOND VISES.



One in a case.

## †DIAMOND VISES WITH DRILLING ATTACHMENT.

```
WILL TAKE SQUARE SHANK DRILLS UP
    TO 3/4 INCH.
```

| Code | Membrane |
| :---: | :---: |
| Each | \$6.00 |
| Weigh | 57 |

Drill Attachments are packed separate.


## NEW "VULCAN" CHAIN PIPE VISES.

WROUGHT STEEL. DROP-FORGED, SAW-TEMPERED JAWS. PARTS INTERCHANGEABLE. UNBREAKABLE. COMPACT. GRIP IS POSITIVE, NON-CRUSHING AND ALWAYS RENEWABLE BY SIMPLY FILING THE TEETH.

Code.
Membraput
Number
Holds pipe, inches ..................................... 1/8 to $21 / 2$
Size, folded, inches...................................... $6 \times 8 \times 8$
Each $\$ 5.00$
Weight each, lbs.
10
$\dagger$ Carried in San Francisco only:


## TINNERS' PARALLEL VISES.

POLISHED STEEL JAWS.



The abore Vise is of superior quality: The Jaws are faced with hardened Steel. Adapted to general use.
Code.Number
200
Width of jaws, inches. ..... $4^{1 / 4}$
Jaws open, inches. ..... $51 / 2$
Each. ..... $\$ 10.00$
Weight each, lbs ..... $+21 / 2$

Loose.


## $\dagger$ PARKER'S PARALLELIVISES.

The steel faces of these Vises are milled and fitted to the Jaws, and are renewable at a trifling cost.

| Code... | Membrell |
| :---: | :---: |
| Number. | 1X |
| Width of jaws, inches | $33 / 4$ |
| Jaws open, inches..... | 51/2 |
| Each. | \$7.00 |
| Wreight each, lbs.. | 45 |
| $\dagger$ Carried in San F |  |



The Steel Faces of these Vises are milled and fitted to the Jaws, and are renewable at a trifling cost.


PARKER'S COMBINATION VISES.

SWIVEL BOTTOMS. GRAY IRON. FOR TINNERS, PLUMBERS, ETC



Loose.

## $\dagger$ Extra Pipe Jaws for Parker Vises.

Code
Numbers
Menapico Menchere
Per pair.
$\$ 3.00$
3.00

## ANGLE PLATE VISES.

| Code | Mendacita | Menderest | Mendette |
| :---: | :---: | :---: | :---: |
| Numbers.............. | 1 | 2 | 3 |
| Hold pipe, inches.. | 1/8 to 2 | 1/t to 3 | 1/2 to 4 |
| Each. | \$8.00 | 15.00 | 22.00 |
| Weight each, lbs... | 32 | 52 | $\ldots$ |
|  | Loose. |  |  |
| $\dagger$ | Extra Jaw | s. |  |
| Code.. |  | Mendicamo | Mendicuio |
| Numbers |  | 1 | 2 |
| Per set | ... | \$2.50 | 3.50 |
| $\dagger$ Carried in San | Francisco | only. |  |



## MALLEABLEIRON PIPE VISES.

```
FOR POCKET OR TOOL CHEST.
```




KEYSTONE PIPE VISES.
MALLEABLE IRON. WITH ROLLER JAWS.

| Code | Meneclito | Menelaud |
| :---: | :---: | :---: |
| Numbers. | R | RR |
| Range, inches | $1 / 8$ to 2 | $1 / 4$ to 3 |
| Each | \$4.00 | 8.00 |
| Weight each, lbs. | 10 | 18 |



## †HINGED COMBINATION PIPE VISES.

MALLEABLE IRON. WITH BENDING FORMS.

Strong and practical. Will give satisfaction for holding or bending pipe. The two bending forms in this V'ise will be found a very useful feature, and do not interfere with the jaws or strength of the Vise. The form on the left of the Vise has a flat surface on top which makes a handy place to hammer on. Jaws are of best tool steel and can be sharpened or duplicated.

|  | Mengretia | Menguado | Menigrepo |
| :---: | :---: | :---: | :---: |
| Numbers | 1 | $\underline{2}$ | 3 |
| Range, inches... | / to $11 / 4$ | 1/8 to 2 | 1/8 to $21 / 2$ |
| Each | \$8.00 | 9.00 | 10.00 |
| reight each, lbs | 6 | 10 | 18 |

Loose.


+ Carried in San Francisco only.



## SAUNDERS' HINGED PIPE VISES.

MALLEABLE IRON. STEEL JAWS.


Loose.
Extra Jaws.
Code.
Memmonism
Per set.
$\$ 3.50$

## ARMSTRONC'S HINGED PIPE VISES.

## MALLEABLE IRON. STEEL JAWS.

Code.
Menogenic Menomass
Numbers.

| Range, inches........................ $1 / 8$ to $21 / 2$ | $1 / 2$ to $41 / 2$ |
| :--- | :---: |
| Each.............................. $\$ 10.00 \quad 20.00$ |  |

Weight each, lbs.............. $10 \quad 40$
Loose.
No. 1 is a light pattern.
Extra Upper Jaws.

| Code... | Mensagero | Mensolette |
| :---: | :---: | :---: |
| Numbers. | 1 | 2 |
| Each | \$0.50 | 75 |
|  | Jaws. |  |
| Code. | Mensuraba | Mensuride |
| Number | 1 | - |
| Per pair | \$1.00 | 1.50 |

$\dagger$ Carried in San Francisco only:

## †PLAIN PIPE TONGS.



Loose.

## BROWN'S ADJUSTABLE PIPE TONGS.



| Code | Mercador | Mercando | Mercapit | Mercatoris | Mercedes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | 1 | $11 / 2$ | 2 | 3 | $\pm$ |
| Takes pipe, inches. | 1/8 to 3/4 | $3 / 8$ to 1 | 1/2 to 11/4 | 1 to 2 | $11 / 2$ to 3 |
| Each.. | \$1.30 | 1.65 | 2.00 | 3.00 | 6.00 |
| Weight each, lbs | $33 / 4$ | 41/2 | 71/4 | 101/2 | 21 |

Loose.

VULCAN CHAIN TONGS.
WITH FLAT LINK CHAINS. WROUGHT STEEL. DROP FORGED JAWS, SAW TEMPERED. WILL NOT CRUSH PIPE.


| Cod | Mercemere | Mercenary | Merciful | Mercurial |
| :---: | :---: | :---: | :---: | :---: |
| Numbers | 11 | 12 | 13 | 14 |
| Takes pipe, inches. | $1 / 8$ to $11 / 2$ | $1 / 4$ to $21 / 2$ | 3/4 to 4 | $11 / 2$ to 8 |
| Length over all, inches | 20 | 27 | 37 | $501 / 2$ |
| Length of chains, inches | $131 / 2$ | $171 / 2$ | $221 / 2$ | 39 |
| Each. | \$3.50 | 5.00 | 7.00 | 11.00 |
| Weight each, lbs | $43 / 4$ | 83/4 | 16 | 29 |

[^44]$\dagger$ Carried in San Francisco only.
TINNERS' AND PLUMBERS' TOOLS.

## TRIMO PIPE WRENCHES.

## FORGED STEEL. PARTS INTERCHANGEABLE.





†STILLSON PIPE WRENCHES.


| Code. Length, inches | $\begin{gathered} \text { Metabate } \\ 6 \end{gathered}$ | $\begin{aligned} & \text { Metacenton } \\ & 8 \end{aligned}$ | Metacisto 10 | Metaforic 14 | Metafrase 18 | Metagogic <br> 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Takes from .... | $\underset{\text { to }}{1 / 8 \text {-in. wire }}$ | $\underset{\text { to }}{1 / 8 \text {-in. wire }}$ | $\begin{aligned} & 1 / 8 \text {-in. wire } \\ & \text { to } \end{aligned}$ | 1/4-in. wire | 1/4-in. wire | $\begin{aligned} & 1 / 4-\mathrm{in} \text {. wire } \\ & \text { to } \end{aligned}$ |
| ( | 1/2-in. pipe | 3/4-in. pipe | 1-in. pipe | 11/2-in. pipe | 2-in. pipe | 21/2-in. pipe |
| Each | \$2.00 | 2.00 | 2.25 | 3.00 | 4.00 | 6.00 |
| Weight each, lbs. | 1/2 | 1 | $11 / 2$ | 31/6 | $51 / 2$ | 8 |

6 to 14 -inch Wrenches have Wood Handles; 18 and 24 -inch Wrenches have all Iron Handles.

## Jaws for Stillson Wrenches.

| Code | Metagram | Metalino | Metallade | Metallisco | Metalurgic | Metaponder |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.75 | . 75 | 80 | 1.00 | 1.33 | 2.10 |


| Code | Metasomis | Metathora | Metellust | Meteoric | Metesilla | Metharmic |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each | \$0.11 | 11 | 14 | 17 | 22 | 35 |

Frames for Stillson Wrenches.

| Code. | Metheglos | Methocamp | Methodist | Methodoro | Methulent | Methylate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Each . | \$0.35 | . 35 | . 40 | . 50 | . 55 | . 80 |

$\dagger$ Carried in San Francisco only.

## WRICHT'S PIPE WRENCHES.

POLISHED STEEL. DISENGAGES ITSELF BY REMOVING PRESSURE FROM LEVER HANDLE.


| Code | Metochist | Metodico | Metoparis |
| :---: | :---: | :---: | :---: |
| Length, inches | 13 | 16 | 24 |
| Opens, inches. | 13/4 | $21 / 8$ | $31 / 2$ |
| Each | \$3.00 | 4.00 | 7.50 |
| Weight each, lbs | $21 / 2$ | 4 | 9 |

Loose.

## $\dagger$ ATLAS PIPE WRENCHES.

MADE OF SPECIAL WRENCH STEEL. NO THREADS TO STRIP. NO NUTS TO JAM. NO SCREW JAWS TO BREAK.


Loose.

## †SHEFFY PIPE WRENCHES.

JESSOP STEEL DOGS. BLACK DIAMOND STEEL JAWS. BESSEMER STEEL HANDLES. EVERY WRENCH GUARANTEED. QUICK ACTION. SELF-ADJUSTING. NO SCREWS. NO SPRINGS.

DISENGAGES ITSELF BY REVERSING PRESSURE ON HANDLE.


| Code | Mettilord | Meublast | Meublon |
| :---: | :---: | :---: | :---: |
| Numbers | 0 | 2 | 4 |
| Length, inches. | 7 | 12 | 18 |
| Takes pipe, inches | 1/8 to 1/2 | $1 / 8$ to 1 | $1 / 4$ to 2 |
| Each. | \$ . 00 | 2.25 | 4.00 |
| Weight each, lbs. | 1/2 | $\stackrel{\square}{2}$ | 5 |

$\dagger$ Carried in San Francisco only.

## ELGIN ADJUSTABLE WRENCHES.

```
FOR PIPE OR NUTS. STEEL. FULLY NICKEL-PLATED. BOTH JAWS HARDENED. WILL TAKE
    FROM 1/8-INCH WIRE TO 3/4-INCH PIPE, OR A NUT THAT IS 1 1/8 INCHES ACROSS,
```



Jaw. Meulards
Code
7
Length, inches $\$ 12.00$
Per dozen $71 / 2$
One-half dozen in a box.
† Extra Jaws for Elgin Wrenches.

Per dozen................................................................................................................. $\$ 3.00$

## †ALLIGATOR WRENCHES.

FORGED STEEL, WITH HARDENED JAWS.


| Code | Mezquita | Mezzadrom | st | Mezzotinte | Miaduram | Miagoland |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Numbers | Pocket | Twin | 1 | 2 | 3 | $\pm$ |
| Length, inches |  | 10 | $53 / 4$ | 10 | 16 | 22 |
| Hold pipe, inches. | $1 / 8$ to $1 / 4$ | $1 / 8$ to $3 / 4$ | $1 / 8$ to $3 / 8$ | $3 / 8$ to $3 / 4$ | 1/2 to $1^{1 / 4}$ | $11 / 4$ to 2 |
| Hold round iron, inches | 1/2 | 1/4 to 1 | $1 / 4$ to $3 / 4$ | 1/2 to 1 | $3 / 4$ to $13 / 8$ | $11 / 2$ to $21 / 2$ |
| Per dozen.. | \$3.00 | 18.00 | 4.00 | 12.00 | 24.00 | 36.00 |
| Weight per doz., lbs | $11 / 2$ | $\ldots$ | 3 | 12 | 36 | 86 |

Pocket has steel screw driver at one end. Twin has wrench at both ends Pocket and No. 1, bright; balance, black. Pocket and No. 1, one dozen in a box.
†BLACK SCREW WRENCHES.


| Code. | Miasmatic | Micantibo | Michaela | Michordi | Micrasten |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Length, inches. | 8 | 10 | 12 | 1.) | 18 |
| Per dozen | \$10.00 | 12.00 | 14.00 | 24.00 | 30.00 |
| Weight per doz | 15 | 20 | 26 | 40 | 60 |

8 to 12 -inch, one-half dozen; 15 and 18 -inch, one-third dozen in a box.
$\dagger$ Carried in San Francisco only.

## McKERCHER WRENCHES.

## MADE OF SEST DROP FORGINGS AND MALLEABLE IRON. SIMPLE, STRONG AND DURABLE. ONLY THREE PARTS, HANDLE, JAW AND SPRING.

Assembled or taken apart as easily as a watch is wound, adjusted in a second, and so proportioned that it carries the strain equally.

No nuts or screws to stick and bind. Disengages itself by reversing pressure on handle.


| Code | Micrastepp | Micrasterb | Micrasterz | Micrastick | Micrastime | Micrasturp |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Length, inche | 6 | 10 | 14 | 18 | 24 | 36 |
| Takes pipe, inches | $1 / 8$ to $3 / 4$ | $1 / 8$ to 1 | 1/4 to $11 / 2$ | $3 / 8$ to 2 | 1/2 to $21 / 2$ | 1 to 4 |
| Each.. | \$2.00 | 2.25 | 3.00 | 4.00 | 6.00 | 12.00 |
| Weight each, pounds. | 3/4 | 1 | 21/4 | 41/4 | 8 | 17 |
| Jaws for McKercher Wrenches. |  |  |  |  |  |  |
| Code | Micrasudd | Micrasuet | Micraswat | Micraswaye | Micratable | Micratade |
| Each | \$0.75 | . 80 | 1.00 | 1.40 | 2.50 | 4.00 |
| Shoes or Small Jaws for McKercher Wrenches. |  |  |  |  |  |  |
| Code |  | Micratamp | Micratandy | Micratanke | Micrataper | Micratarz |
| Each |  | \$0.50 | . 65 | 1.10 | 1.50 | 2.50 |
| Handle Including Shoe for McKercher Wrenches. |  |  |  |  |  |  |
| Code | Micrateems | Micrategg | Micratimbo | Micratizer | Micratoast | Micratobey |
| Each | \$1.50 | 1.75 | 2.00 | 3.00 | 4.50 | 9.00 |
| Springs for McKercher Wrenches. |  |  |  |  |  |  |
| Code | Micratodd | Micreate | Micrebber | Micredanze | Micredapel | Micredatti |
| Each... | \$0.20 | . 25 | . 35 | . 45 | . 60 | . 80 |

## †THE YANKEE JAWS.

CONVERTS AN ORDINARY WRENCH INTO A PIPE WRENCH. MADE FROM HIGH GRADE STEEL. any mechanic will see their value at once.


Cut shows Jaw and Jaw Applied.

| Code | Micrefatal | Micrefurze |
| :---: | :---: | :---: |
| Numbers | 2 | 1 |
| To fit wrenches, inches | Up to 16 | 16 to 26 |
| Per dozen | \$3.70 | 4.00 |
| W'eight per dozen, lbs | $33 / 4$ | $61 / 4$ |
|  |  |  |

[^45]
## HEADSON AUTOMATIC PIPE WRENCH.

MADE OF BEST DROP FORGE TOOL STEE.

IT IS MACHINED AND TEMPERED.

(Patent Pending.


## A PERFECT PIPE IVRENCH.

The only perfect automatic pipe wrench; it is absolutely free from all screw adjustment. It adjusts itself instantly to any size pipe. It never slips, never crushes, never sticks and is easily operated. It has an inserted jaw in the handle, which can be replaced, and every part of this wrench is made interchangeable. On large-sized pipe, instead of having the, jaws overhanging as in the ordinary wrench, the pull is equal on both jaws, consequently making it a very strong and durable wrench. The parts are all made of the very best drop forge steel.

To operate this wrench in the position it now stands you merely move the handle forward and it adjusts itself to the pipe. To open wrench, disengage the spraul which is fulcrumed from a perfect center, and it opens immediately to the full size of the wrench.

## $\dagger$ WARNOCK WRENCHES.

## DROP FORGED AND SELECTED STOCK WITH LINEN STRAP. POLISHED PIPE, SHAFTS, TUBING ALL GRIPPED SECURELY WITHOUT A MARK. ADJUST THEMSELVES <br> TO EVERY SIZE INSTANTLY. <br> 


†BUZZELL'S BASIN WRENCHES.

Code. Microbes
Per dozen ..... $\$ 22.00$
Weight per doz., lbs ..... 18

Loose.

## TRIMO BASIN WRENCHES.

This Wrench can be used in closer quarters than any other Wrench of its kind. Can be operated with one hand. Parts interchangeable.

Code ..... Microdet
Length, inches ..... 10
Per dozen ..... $\$ 22.50$
Weight per doz., lbs ..... 16
EXTRAS
Jaws, each $\$ 0.75$ Springs, each ..... $\$ 0.15$
Nuts, each 30 Screws, each ..... 30

[^46]
## ‘ PLUMBERS' FORCE PUMPS.

FITTED FOR HOSE.


Fig. $21 \%$.
This is a very powerful Force or Pressure Pump. The cylinder and working parts are of cast brass. The Pump is usually placed in a pail of water when used and connected with the pipe to be cleaned by hose.
Code. ..... Micrometer
Figure ..... 217
Diameter, inches ..... 2
Length of stroke, inches ..... 5
Capacity per stroke, gallon ..... 1/14
Each. ..... $\$ 10.00$
Weight each, lbs. ..... 12
†PLUMBERS' HANDY FORCE PUMPS.


Fig. 373.
The cut shows a very compact form of Plumbers' Force Pump, which meets the requirements of the practical plumbing trade. This Pump is made entirely of brass and is designed to be placed in a pail. By its use a great pressure may be put upon pipes for cleaning out obstructions. It is fitted with three feet of hose and conical tip, so that it can be readily connected with any ordinary sized pipe or fixture. The form of the Pump renders it more convenient for carrying in a sack of plumbers' tools than any Pump having a projecting handle.
$\qquad$
Figure 373
Each
Weight each, lbs
$\dagger$ Carried in San Francisco only.

## PLUMBERS' FORCE PUMPS.

FITTED FOR HOSE.

The cut shows a powerful Plumbers' Force Pump, the cylinder and working parts being entirely of brass.

It is provided with a strong iron stirrup, and has couplings for $3 / 4$-inch hose.
Code.Midasian
Figure.425
Diameter of cylinder, inches ..... 2
Length of stroke, inches5
Capacity per stroke, gallon. ..... 07
Each ..... $\$ 15.00$
Weight each, lbs ..... 17


Fig. 4205.

## CGAS MAIN FORCE PUMP OR SERVICE CLEANER.

This pump is superior to any other on the market, having metal valves, thereby increasing its durability, and is by all means the best pump for cleaning waste and service pipes.

The chamber of the pump is made of seamless brass tubing, size $2 \frac{1}{8} \times 12$ inches, and the air reservoir of extra heavy copper, size $8 \times 10$ inches; with stop cock and $3 / 4$-inch hose coupling. Extreme height, 25 inches.

[^47]
†IMPROVED TESTING PUMPS.
(Patent applied for.)


The above cut illustrates our Gas-fitters' Test Pump, combined with our Improved Mercury and Spring Test Gauges.

The Mercury Test Gauge consists of a Mercury Cup, Ether Cup, Stop Cock and Mercury Column.
$A$-The Mercury Cup is made of iron, and screws into the lower part of the Gauge; when not in use it can easily be unscrewed and closed with the screw cap, $B$, to prevent loss of mercury.
$C$ is a piece of gas pipe to attach in place of the Mercury Cup, when the latter is taken off; to protect the projecting glass tube.
$D$ is a Stop Cock to shut off the air.
Our Mercury Test Gauges are made in the best and most durable manner and superior to all others, for the following reasons:

First. The Mercury Cup is at the bottom of the Gauge, and is readily unscrewed, closed with the screw cap and put in the bag with other tools. The old method of taking the cup out of the chamber, pouring the mercury into a bottle and carrying it in the pocket, is thus done away with.

Second. The Mercury Cup being at the bottom, there is no chance for the mercury to spill over the brass parts and destroy them.

Third. For greater convenience we have graduated the column, which we consider a decided improvement. The Pump has most excellent metal valves, and is particularly well adapted for the purpose. The Spring Test Gauge is neatly made, the Gauge itself being $21 / 2$ inches in diameter.


+ Carried in San Francisco only.



## SPENCER \& FISHER'S MERCURY TEST GAUGES.

## BRASS NICKEL-PLATED. HIGH OR LOW. PRESSURE

Simple. Accurate. Reliable. Every Gauge is tested before leaving the factory. Pour 5 ounces of Mercury in the $3 / 8$-inch opening and the gauge is ready for operation: Turn the Gauge in any position and the Mercury will not spill.


## Extra Gauge Glasses.

| Code | Midlamp | Midlander |
| :---: | :---: | :---: |
| Style. | Short | Long |
| Length, inch. | $101 / 2$ | $131 / 2$ |
| Diameter, inch. | 5/16 | 5/16 |
| Each. | \$..... |  |

## U. S. GALLONS IN ROUND TANKS.

For One Foot in Depth.

$311 / 2$ Gallons equals 1 Barrel.
To find the capacity of tanks greater than the largest given in the table, look in the table for a Tank of one-half of the given size and multiply its capacity by 4 , or one of one-third its size and multiply its capacity by 9 , etc.

## NUMBER OF U. S. GALLONS IN RECTANGULAR TANKS

For One Foot in Depth.

| Width of Tank. | Length of Tank. |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2 Feet. | $2 \text { Feet }$ $6 \mathrm{In} .$ | 3 Feet. | $\begin{aligned} & 3 \text { Feet } \\ & 6 \mathrm{In} . \end{aligned}$ | 4 Feet. | 4 Feet 6 Inches. | 5 Feet. | 5 Feet 6 Inches. | 6 Feet. | 6 Feet 6 Inches. | 7 Feet. |
| 2 feet. | 29.92 | 37.40 | 44.88 | 52.36 | 59.84 | 67.32 | 74.81 | 82.29 | 89.75 | 97.2 .5 | 104.73 |
| 26 inches |  | 46.75 | 56.10 | 65.45 | 74.80 | 84.16 | 93.51 | 102.86 | 112.21 | 121.56 | 130.91 |
| 3 |  |  | 67.32 | 78.54 | 89.77 | 100.99 | 112.21 | 123.43 | 134.65 | 145.87 | 157.09 |
| 36 inches | ......... |  |  | 91.64 | 104.73 | 117.82 | 130.91 | 144.00 | 157.09 | 170.18 | 183.27 |
| 4 .......... | ......... |  | ........ | ........ | 119.69 | 134.65 | 149.61 | 164.57 | 179.53 | 194.49 | 209.45 |
| 6 inches | ......... |  | ...... | ....... | ......... | 151.48 | 168.31 | 185.14 | 201.97 | 218.80 | 235.63 |
| 5 .......... |  |  | ... | ....... | ......... | ......... | 187.01 | 205.71 | 224.41 | 243.11 | 261.82 |
| 56 inches |  |  | ....... |  |  | ......... |  | 226.28 | 246.86 | 267.43 | 288.00 |
| 6 |  |  | . |  |  |  |  | ......... | 269.30 | 291.74 | 314.18 |
| $6 \quad 6$ inches |  |  |  |  |  |  |  |  |  | 316.05 | 340.36 |
| 7 |  |  |  |  |  |  |  |  |  |  | 366.54 |


| Width of Tank. | Length of Tank. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 7 \text { Feet } \\ & 6 \mathrm{In} . \end{aligned}$ | 8 Feet. | $\begin{aligned} & 8 \text { Feet } \\ & 6 \mathrm{In} . \end{aligned}$ | 9 Feet. | $\begin{aligned} & 9 \text { Feet } \\ & 6 \mathrm{In} . \end{aligned}$ | 10 Feet. | 10 Feet 6 In. | 11 Feet. | $\begin{aligned} & 11 \text { Feet } \\ & 6 \mathrm{In} . \end{aligned}$ | 12 Feet. |
| 2 feet. | 112.21 | 119.69 | 127.17 | 134.65 | 142.13 | 149.61 | 157.09 | 164.57 | 172.0 .5 | 179.58 |
| 26 inches | 140.26 | 149.61 | 158.96 | 168.31 | 177.66 | 187.01 | 196.36 | 205.71 | 215.06 | 224.41 |
| 3 | 168.31 | 179.53 | 190.75 | 202.97 | 213.19 | 224.41 | 235.63 | 246.86 | 258.07 | 269.30 |
| 366 inches | 196.36 | 209.45 | 222.54 | 235.63 | 248.73 | 261.82 | 274.90 | 288.00 | 301.09 | 314.13 |
| $+$ | 224.41 | 239.37 | 254.34 | 269.30 | 284.26 | 299.22 | 314.18 | 329.14 | $34 \pm .10$ | 359.06 |
| $\pm 6$ inches | 252.47 | 269.30 | 286.13 | 302.96 | 319.79 | 336.62 | 353.45 | 370.28 | 387.11 | 403.94 |
| 5 | 280.52 | 299.22 | 317.92 | 336.62 | 355.32 | 374.03 | 392.72 | 411.43 | 430.13 | 448.83 |
| 56 inches | 308.57 | 329.14 | 349.71 | 370.28 | 390.85 | 411.43 | 432.00 | 452.57 | 473.14 | 493.71 |
| 6 ........... | 336.62 | 359.06 | 381.50 | 403.94 | 426.39 | 448.83 | 471.27 | 493.71 | 516.15 | 538.59 |
| 6 inches | 364.67 | 388.98 | 413.30 | 437.60 | 461.92 | 486.23 | 510.54 | 534.85 | 559.16 | 583.47 |
| 7 . .......... | 392.72 | 418.91 | 445.09 | 471.27 | 497.45 | 523.64 | 549.81 | 575.99 | 602.18 | 628.36 |
| 76 inches | 420.78 | 448.83 | 476.88 | 504.93 | 532.98 | 561.04 | 589.08 | 617.14 | 645.19 | 673.24 |
| 8 |  | 478.75 | 508.67 | 538.59 | 568.51 | 598.44 | 628.36 | 658.28 | 688.20 | 718.12 |
| 86 inches |  |  | 540.46 | 572.25 | 604.05 | 635.84 | 667.63 | 699.42 | 731.21 | 763.00 |
| 9 |  |  |  | 605.92 | 639.58 | 673.25 | 706.90 | 740.56 | 774.23 | 807.89 |
| 96 inches |  |  |  |  | 675.11 | 710.65 | 746.17 | 781.71 | 817.24 | 852.77 |
| 10 ........... |  |  |  |  |  | 748.05 | 785.45 | 822.86 | 860.26 | 897.66 |
| $10 \quad 6$ inches |  |  |  |  |  |  | 824.73 | 864.00 | 903.26 | 942.56 |
| 11 |  |  |  |  |  |  |  | 905.14 | 946.27 | 987.43 |
| 116 inches |  |  |  |  |  |  |  |  | 989.29 | 1032.3 |
| 12 |  |  |  |  |  |  |  |  |  | 1077.2 |

## CAPACITY OF CANS ONE INCH DEEP．

UTILITY OF TABLE．

Required the contents of a vessel，diameter $67 / 1$ 。 inches，depth 10 inches：
By the table，a vessel 1 inch deep，and $6 \frac{1}{1}$ 。inches diameter，contains .15 of a gallon；then $15 \times 10=1.50$ ，or 1 gallon and 2 quarts．

Required the contents of a can，diameter $198 / \frac{1}{1}$ oinches，depth 30 inches：
By the table，a vessel 1 inch deep，and $19 \frac{1}{1}$ 。inches diameter，contains 1.33 gallons；then $1.33 \times 30=$ or 39.90 ，or nearly 40 gallons．

Required the depth of a can whose diameter is $12^{2 / 1}{ }^{2}$ inches，to contain 16 gallons：
By the table，a vessel 1 inch deep，and $12 \frac{2 / 1}{}$ inches diameter，contains .50 of a gallon；then $16 \div .50=32$ inches，the depth required，viz．：
$50) 16(32 \times .50=16$ gallons．

| Diameter， Inches． |  | 1／10 | 210 | 3／10 | 4／10 | 5／8。 | 610 | 710 | 8／10 | 9／0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | ． 030 | ． 030 | ． 030 | ． 030 | 030 | ． 040 | ． 040 | ． 040 | ． 040 | ． 050 |
| 4 | ． 050 | ． 040 | ． 050 | ． 050 | ． 060 | ． 060 | ． 070 | ． 070 | ． 070 | ． 080 |
| 5 | ． 080 | ． 080 | ． 080 | ． 090 | ． 090 | 100 | ． 100 | 110 | 110 | 110 |
| 6 | ． 120 | ． 120 | ． 120 | 130 | 130 | 140 | ． 140 | 150 | 150 | 160 |
| 7 | ． 160 | 170 | 170 | ． 180 | ． 180 | 190 | 190 | 200 | 200 | 210 |
| 8 | ． 210 | 220 | 220 | 230 | 230 | 240 | 250 | 250 | 260 | 260 |
| 9 | ． 270 | 280 | 280 | 290 | ． 300 | ． 300 | 310 | 310 | ． 320 | ． 330 |
| 10 | ． 340 | 340 | 350 | 360 | ． 360 | 370 | 380 | ． 380 | 390 | ． 400 |
| 11 | 410 | .410 | 420 | 430 | 440 | 440 | 450 | 460 | ． 470 | 480 |
| 12 | 480 | 490 | 500 | 510 | ． 520 | 530 | ． 530 | 540 | ． 550 | ． 560 |
| 13 | ． 570 | ． 580 | 590 | ． 600 | 600 | ． 610 | ． 620 | 630 | 640 | ． 650 |
| 14 | 660 | ． 670 | 680 | ． 690 | ． 700 | 710 | ． 720 | 730 | 740 | ． 750 |
| 15 | 760 | ． 770 | 780 | ． 790 | ． 800 | 810 | ． 820 | ． 830 | 840 | ． 850 |
| 16 | ． 870 | ． 880 | 890 | ． 900 | ． 910 | ． 920 | ． 930 | ． 940 | 950 | ． 970 |
| 17 | ． 980 | ． 990 | 1.005 | 1.017 | 1.028 | 1.040 | 1.051 | 1.063 | 1.075 | 1.086 |
| 18 | 1.101 | 1.113 | 1.125 | 1.138 | 1.150 | 1.162 | 1.170 | 1.187 | 1.200 | 1.211 |
| 19 | 1.227 | 1.240 | 1.253 | 1.266 | 1.279 | 1.292 | 1.304 | 1.317 | 1.330 | 1.343 |
| 20 | 1.360 | 1.373 | 1.385 | 1.400 | 1.414 | 1.428 | 1.441 | 1.455 | 1.478 | 1.482 |
| 21 | 1.499 | 1.513 | 1.527 | 1.542 | 1.556 | 1.570 | 1.585 | 1.600 | 1.612 | 1.630 |
| 22 | 1.645 | 1.660 | 1.675 | 1.696 | 1.705 | 1.720 | 1.735 | 1.750 | 1.770 | 1.780 |
| 23 | 1.798 | 1.814 | 1.830 | 1.845 | 1.861 | 1.876 | 1.892 | 1.908 | 1.923 | 1.940 |
| 24 | 1.958 | 1.974 | 1.991 | 2.007 | 2.023 | 2.040 | 2.056 | 2.072 | 2.096 | 2.105 |
| 25 | 2.125 | 2.142 | 2.159 | 2.176 | 2.193 | 2.210 | 2.227 | 2.244 | 2.261 | 2.280 |
| 26 | 2.298 | 2.316 | 2.333 | 2.351 | 2.369 | 2.386 | 2.404 | 2.422 | 2.440 | 2.460 |
| 27 | 2.478 | 2.496 | 2.515 | 2.533 | 2.552 | 2.570 | 2.588 | 2.607 | 2.625 | 2.643 |
| 28 | 2.665 | 2.684 | 2.703 | 2.722 | 2.741 | 2.764 | 2.780 | 2.800 | 2.820 | 2.836 |
| 29 | 2.859 | 2.879 | 2.898 | 2.918 | 2.938 | 2.958 | 2.977 | 2.997 | 3.017 | 3.036 |
| 30 | 3.060 | 3.080 | 3.100 | 3.121 | 3.141 | 3.162 | 3.182 | 3.202 | 3.223 | 3.245 |
| 31 | 3.267 | 3.288 | 3.309 | 3.330 | 3.351 | 3.372 | 3.393 | 3.414 | 3.436 | 3.457 |
| 32 | 3.481 | 3.503 | 3.524 | 3.543 | 3.568 | 3.590 | 3.612 | 3.633 | 3.655 | 3.689 |
| 33 | 3.702 | 3.725 | 3.747 | 3.773 | 3.795 | 3.814 | 3.837 | 3.860 | 3.882 | 3.904 |
| 34 | 3.930 | 3.953 | 3.976 | 4.003 | 4.022 | 4.046 | 4.070 | 4.092 | 4.115 | 4.140 |
| 35 | 4.165 | 4.188 | 4.212 | 4.236 | 4.260 | 4.284 | 4.307 | 4.331 | 4.355 | 4.380 |
| 36 | 4.406 | 4.430 | 4.455 | 4.483 | 4.503 | 4.528 | ＋． 553 | 4.577 | 4.602 | 4.626 |
| 37 | 4.654 | 4.679 | 4.704 | 4.730 | 4.755 | 4780 | 4.805 | 4.834 | 4.855 | 4.880 |
| 38 | 4.909 | 4.935 | 4.961 | 4.987 | 5.012 | 5.038 | 5.064 | 5.090 | 5.120 | 5.142 |
| 39 | 5.171 | 5.197 | 5.224 | 5.250 | 5.277 | 5.304 | 5.330 | 5.357 | 5.383 | 5． 410 |
| 40 | 5.440 | 5.467 | 5.491 | 5.521 | 5.548 | 5.576 | 5.603 | 5.630 | 5.657 | 5.684 |

## CAPACITY OF CISTERNS.

IN GALLONS FOR EACH 10 INCHES IN DEPTH.

| Diameter, Feet. | Gallons. | Diameter, Feet. | Gallons. | Diameter, Feet. | Gallons. | Diameter, Feet. | Gallons. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 19.5 | $51 / 2$ | 148.1 | 9 | 396.56 | 15 | 1101.6 |
| $21 / 2$ | 30.5 | 6 | 176.25 | $91 / 2$ | 461.4 | 20 | 1958.4 |
| 3 | 44.6 | $61 / 2$ | 206.85 | 10 | 489.9 | 25 | 3059.9 |
| $31 / 2$ | 59.97 | 7 | 239.88 | 11 | 592.4 | 30 | 4406.4 |
| 4 | 78.33 | $71 / 2$ | 275.4 | 12 | 705. | 35 | 5990. |
| $\pm 1 / 2$ | 99.14 | 8 | 313.33 | 13 | 827.4 | 40 | 7831. |
| 5 | 122.4 | $81 / 2$ | 353.72 | 14 | 959.6 |  |  |

## TO FIND THE SPECIFIC GRAVITYOF A SUBSTANCE.

$W=$ Weight of body in air.
$z^{\prime}=$ Weight of body in water.
Specific gravity $=\frac{W}{W-\pi}$
If the substance be lighter than water, sink it by means of a heavier substance, and deduct the weight of the heavier substance.

## WEIGHT AND SPECIFIC GRAVITY OF VARIOUS MATERIALS.

| Material. | $\begin{aligned} & \text { Weight } \\ & \text { per } \\ & \text { pu. Ft. } \end{aligned}$ | Specific Gravity. | Material. | $\begin{array}{\|c} \text { Weight } \\ \text { per } \\ \text { Cu. Ft. } \end{array}$ | Specific Grav ity. | Material. | $\begin{aligned} & \text { Weight } \\ & \text { per } \\ & \text { Cu. Ft. } \end{aligned}$ | Specific <br> Gravity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Asphaltum | 87 | 1.4 | Earth, fron | 77 | 1.52 | Millstone | 155 |  |
| Basalt.. | 181 | 2.9 | Earth, to. | 125 | 2. | Pitch. | 72 | 1.15 |
| Brick, Comı., from | 100 | 1.6 | Emery | 250 |  | Plaster Paris, Cast | 80 |  |
| Brick, Com., to ... | 125 | 2. | Flint | 162 | 2.6 | Plumbago........... | 140 | 2.267 |
| Brick, Pressed... | 134 | 2.16 | Glass, Flint. | 192 | 3.088 | Porphyry. | 170 | 2.73 |
| Brick, Fire......... | 150 | 2.04 | Glass, Common... | 157 | 2.52 | Pumice Sto | 57 |  |
| Brick, in Mortar.. | 110 |  | Glass, Plate ......... | 172 | 2.76 | Quartz. | 165 | 2.65 |
| Brick, in Cement | 112 |  | Glass, Flooring | 158 | 2.258 | Sand, river | 117 | 1.88 |
| Cement, Port.. loose.... | 78 |  | Granite, Gray | 163 | 2.262 | Sand, coars | 100 | 1.61 |
| Cement, Rose, loose.. | 60 |  | Granite, Red | 165 | 2.262 | Sand Stone | 150 | 2.4 |
| Chalk, solicl.. | 145 | 2.33 | Gutta Percha | 60 | . 966 | Slate, American... | 175 | 2.8 |
| Charcoal, Birch... | 34 |  | Gun Powder, coarse. | 57 |  | Slate, Welsh | 180 | 2.88 |
| Charcoal, Fir....... | 28 |  | Gun Powder, fine | 56 |  | Snow, fresh fallen | 5 to 12 |  |
| Charcoal... | 21 |  | Gypsum ... | 143 | 2.286 | Snow, wet and compact- |  |  |
| Charcoal, Pine | 18 |  | Ivory. | 114 | 1.82 | ed by rain ........... | 15 to 20 |  |
| Clay .. | 119 | 1.9 | Lime Stone | 168 | 2.7 | Sulphur.............. |  |  |
| Coal, Anthracite.. | 93.5 | 1.5 | Lime, Quick | 53 | . 843 | Tallow | 58.6 | 2.94 |
| Coal, Bituminous | 84 | 1.35 | Marble | 168 |  | Tar. | 63 | . 016 |
| Coal, Cannel....... | 79 | 1.27 | Masonry, Ashlar... | 160 |  | Trap | 170 | 1.72 |
| Coke. | 26 |  | Masonry, Rubble.. | 180 |  | Tile. | 115 | 2.85 |
| Concrete. in Cement.. | 137 | 2.2 | Mortar, average... | 106 | 1.7 | Wax, Bees.. | 60.5 | 1.97 |

## WEIGHT AND SPECIFIC GRAVITY OF TIMBER.

SEASONED.

| Name | Wt. Per $\mathrm{Cu} . \mathrm{Ft}$. Aver'ge | Specifc Gravity Aver'ge | Name | Wt. Per $\mathrm{Cu} . \mathrm{Ft}$. Aver'ge | Specific Gravity Aver'ge | Name | Wt. Per Cu . Ft . Aver'ge | Specific <br> Gravity <br> Aver'ge |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Apple | 49 | 79 | Ebony | 74 | 1.187 | Maple, Soft | 42 | 675 |
| Ash.. | 47 | 76 | Elm.. | 35 | . 56 | Oak, Live.. | 60 | . 96 |
| Beech | 43 | . 696 | Hemlock | 25 | . 4 | Oak, White | 52 | . 83 |
| Birch | 45 | 73 | Hickory. | 53 | . 85 | Oak, Red | 45 | 725 |
| Box | 60 | . 96 | Horn ${ }^{\text {Beam }}$......... | 47 | . 76 | Pine, White | 25 | 40 |
| Cedar, WYest India | 47 | 748 | Iron Wood. | 71 | 1.15 | Pine, Yellow, Northern | 35 | . 564 |
| Cedar, American | 35 | . 554 | Larch . | 35 | . 556 | Pine, Yellow, Southern. | 45 | . 72 |
| Cedar, Lebanon.. | 30 | 486 | Lignumvitæ .......... | 83 | 1.333 | Sycamore. | 37 | . 601 |
| Cherry............... | 42 | . 672 | Mahogany Honduras.... | 35 | . 56 | Teak. | 46 | . 74 |
| Chestnut ........... | 41 | . 66 | Mahogany, Spanish ..... | 53 | . 582 | W'alnut. | 35 | . 56 |
| Cork | 15 | 24 | Maple, Rock ........ | 49 | . 79 |  |  |  |

## AVERAGE WEIGHT AND SPECIFIC GRAVITY OF METALS.



## AVERAGE WEIGHT AND SPECIFIC GRAVITY OF LIQUIDS.

Water.-The weight of fresh water is in practice usually assumed at $621 / 2$ pounds per cubic foot. But $62 \frac{1}{4}$ would be nearer the truth at ordinary temperatures, about 70 degrees; or 1 pound $=27.759$ cubic inches.

| Liquids | Specific <br> Gravity | Wt. Per Cu In., Pounds | Wt. Per Gallon | Liquids | Specific Gravity | W't. Per $\mathrm{Cu} . \mathrm{In} .$, Pounds | Wt. Per Gallon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Water, distilled 62 ${ }^{\circ}$ fahr.. | 1 | 036 | 8.33 | Honey... | 1.450 | 052 | 12.00 |
| W'ater, Sea. | 1.0300 | . 037 | 8.55 | Milk . | 1.032 | 037 | 8.55 |
| Water, Dead Sea. | 1.2400 | . 045 | 10.40 | Molasses | 1.426 | 050 | 11.66 |
| Acid, Acetic ........... | 1.062 | 038 | 8.78 | Oil, Linseed ......... | 940 | 034 | 7.85 |
| Acid, Nitric.... | 1.217 | . 044 | 1016 | Oil, Olive.............. | . 915 | 033 | 7.62 |
| Acid, Sulphuric | 1.841 | . 067 | 15.48 | Oil, Turpentine ..... | . 870 | 031 | 716 |
| Acid, Muratic... | 1.200 | 043 | 9.93 | Oil, Whale....... | . 923 | 033 | 7.65 |
| Alcohol, Pure. | . 792 | . 029 | 6.70 | Naphtha.............. | 848 | 031 | 7.00 |
| Alcohol, Proof ........ | . 916 | . 033 | 7.62 | Petroleum | . 878 | 032 | 7.39 |
| Alcohol, Commercial | 833 | 030 | 6.93 | Tar | 1.015 | 036 | 8.40 |
| Cider.................... | 1.018 | 036 | 8.40 | Wines, Average..... | . 998 | . 036 | 8.30 |

## WEIGHTS OF LUMBER, ETC., DRY.

| Articles | Weight, <br> Pounds |  | Articles |  |
| :--- | ---: | :--- | :--- | :--- | :--- |
| Weight, |  |  |  |  |
| Pounds |  |  |  |  |

## MISCELLANEOUS WEICHTS.

| Articles. | Weight: Pounds. | Articles. | Weight, Pounds. |
| :---: | :---: | :---: | :---: |
| Flour, barrel | 196 | Cement (Hy.), Rosedale, bushel.......... | 70 |
| Salt, barrel.. | 280 | Cement (Hy.), Louisville, bushel.......... | 62 |
| Beef, barrel. | 200 | Cement (Hy.), Portland, bushel............ | 96 |
| Pork, barrel. | 200 | Gypsum, ground, bushel...................... | 70 |
| Fish, barrel.. | 200 | Lime, loose, bushel.. | 70 |
| Powder, keg. | 25 | Lime, well shaken, bushel. | 80 |
| Stone of Lead or Iron. | 14 | Sand at 98 lbs . per cubic foot, bushel..... | $1221 / 2$ |

18.29 bushels sand=ton. 1.18 tons=cubic yard.

Anthracite coal, broken, cubic foot averages 54 lbs .
A ton loose occupies 40 to 43 cubic feet.
Bituminous coal, broken, cubic foot averages 49 lbs .
A ton loose occupies 43 to 48 cubic feet.

## TO DERIVE WEIGHT OF IRON.

The average weight of Wrought Iron is 480 lbs . per cubic foot.
To find the sectional area, given the weight per foot: Multiply by $3 / 10$.
To find the weight per foot, given the sectional area: Multiply by $3 / 10$.
For Round Iron the weight per foot may be figured by taking the diameter in $1 / 4$ inches; square it and divide by 6 .

Example: What is the weight per foot of 2 -inch Round Iron? 2 inches $=8$ quarter inches. $8 \times 8=64 . \quad 64 \div 6=10^{2} / 3 \mathrm{lbs}$. per foot.

Example: What is the weight per foot of $3 / 4$-inch Round Iron? $3 / 4$ inch $=3$ quarter inches. $3 \times 3=9 . \quad 9 \div 6=11 / 2 \mathrm{lbs}$. per foot.

## TO ASCERTAIN THE WEIGHT OF COPPER.

Find the number of cubic inches in the piece, multiply by .3214 , and the product will be the weight in pounds.

## WEICHT OF SHEET COPPER

## Per Square Foot.



## PURE BLOCK TIN PIPE.

Weight per Foot.

| Diameter, inch............ ${ }^{\text {s/s }}$ | 3/16 | ${ }_{4}^{1}$ | 1/2 | 5/16 | 3/8 | 3 s | 7/1. | 1/2 | 1/2 | 1/2 | 5/8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weight per foot, ounces. $1^{3}+$ | 23 | $31 / 2$ | 8 | $61 / 2$ | + | 7 | 7 | 10 | 8 | $61 / 2$ | 11 |
| Diameter, inches. | 5/8 | $3{ }^{3}$ | $3 / 4$ | 1 | 1 | $1{ }^{1 / 4}$ | 14 | $11 / 2$ | $11 / 2$ | $\underline{2}$ | $\because$ |
| Weight per foot, ounces....... | 9 | 13 | 11 | 17 | 14 | 26 | 18 | 36 | 24 | 40 | 21 |

ALLOWANCES FOR SHRINKAGE OF CASTINGS.


## TABLE OF WEIGHTS.

Per Square Foot of Iron, Steel. Copper, Brass and Pure Aluminum in Sheets and Thickness in Decimals of an Inch.

By: American Gauge (Brown \& Sharpe's).

| Gauge No. | Thickness in Decimals of an Inch. | WEIGHT OF PLATES PER SQUARE FOOT. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wrought Iron, Lbs. | Steel, Lbs. | Copper, Lbs. | Brass, Lbs. | Pure Aluminum, Lbs. |
| 1 | 2900 | 10.84880 | 10.99340 | 13.10500 | 12.38200 | 4.17600 |
| 2 | . 2580 | 9.66110 | 9.78990 | 11.67100 | 11.02700 | 3.71520 |
| 3 | . 2300 | 8.60330 | 8. 71800 | 10.39300 | 9.81920 | 3.31200 |
| 4 | . 2050 | 7.66160 | 7.76380 | 9.25520 | S.74450 | 2.95200 |
| 5 | . 1820 | 6.82280 | 6.91370 | 8.24190 | 7.78700 | 2.62080 |
| 6 | . 1620 | 6.07 .580 | 6.15680 | 7.33950 | 6.93450 | 2.33280 |
| 7 | . 1450 | 5.410 .50 | 5.48260 | 6.53590 | 6.17520 | 2.08800 |
| 8 | . 1290 | $4.818+0$ | 4.88260 | 5.82060 | 5. 49940 | 1.85760 |
| 9 | . 1150 | t. 29110 | 4.34830 | 5.18370 | 4.89760 | 1.65600 |
| 10 | . 1020 | 3.82090 | 3.87180 | 4.61560 | 4.36090 | 1. 46880 |
| 11 | . 0907 | $3.40 \div 80$ | 3.44820 | +.11060 | 3.88380 | 1.30608 |
| 12 | . 0808 | 2. 0:30:30 | 3.07070 | 3.66060 | 3.45860 | 1.16352 |
| 13 | . 0120 | 2.698 .50 | 2.73450 | 3.25980 | 307990 | 1.03680 |
| 14 | . 0640 | $2.403 \div 0$ | 2.43520 | 2.90300 | 2.74280 | . 92160 |
| 15 | . 0570 | 2. 14010 | 2.16860 | 2.58520 | 2.44250 | . 80080 |
| 16 | . 0508 | 1.90 .880 | 1.93120 | 2.30210 | 2.17510 | .73152 |
| 17 | . 0453 | 1.69710 | 1.71980 | 2.05010 | 1.93700 | . 65232 |
| 18 | . 0403 | 1.51140 | 1.53150 | 1.82570 | 1. 72500 | . 58032 |
| 19 | . 0359 | 1.34 .990 | 1.36380 | 1.62580 | 1.53610 | .51696 |
| 20 | . 0320 | 1.19850 | 1.21450 | 1.44780 | 1.36790 | . 460 S0 |
| 21 | . 0285 | 1.06730 | 1.08160 | 1.28930 | 1.21820 | . 41040 |
| 22 | .0254 | .95051 | . 96319 | 1.14820 | 1.08490 | . 36576 |
| 23 | . 0225 | . $846 \pm 1$ | . 85770 | 1.02250 | . 96604 | . 32400 |
| 24 | . 0201 | . 75375 | . 76380 | . 91053 | . 86025 | 28944 |
| 25 | . 0179 | .67125 | .68020 | . 81087 | . 76612 | 25776 |
| 26 | . 0160 | . 5977.5 | . 60572 | . 72208 | . 68223 | 23040 |
| 27 | . 0142 | 5:301 | . 53941 | . $6 \pm 303$ | . 60755 | 20448 |
| 28 | . 0127 | . 7404 | . 48036 | .5-26t | . 54103 | .18288 |
| 29 | . 0113 | . 42214 | $+2777$ | . 50994 | +8180 | $162 \% 2$ |
| 30 | . 0100 | . 3 こ! 4 | .38095 | . $45+13$ | . 42907 | 14400 |
| Specific gravity Weight, per cubic foot |  | $7.78000$ | 7.80500 | $8.90000$ | $\text { S. } 40000$ | $2.67000$ |
|  |  | $480.00000$ | $490.00000$ | 555.00000 | $52+.00000$ | $166.00000$ |

The weights given in these tables are theoretically correct, but variations must be expected in practice.

For Table of Weights and Thickness of Iron Sheets, Standard Gauge, adopted by the U'nited States, taking effect July 1, 1893, see page 6ï.

## NUMBER U. S. STANDARD THREADS TO AN INCH.

| Diameter, inches....... $1 / 4$ | $5 / 6$ | $3 / 8$ | $7 / 16$ | $1 / 2$ | $9 / 16$ | $5 / 8$ | $3 / 4$ | $7 / 8$ | 1 | $11 / 8$ | $11 / 4$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of threads.... | 20 | 18 | 16 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 7 |
| Diameter, inches...... | $13 / 8$ | $11 / 2$ | $15 / 8$ | $13 / 4$ | $17 / 8$ | 2 | $21 / 4$ | $21 / 2$ | $23 / 4$ | 3 | $3^{1 / 4}$ | $31 / 2$ |
| Number of threads.... | 6 | 6 | $51 / 2$ | 5 | 5 | $41 / 2$ | $41 / 2$ | 4 | 4 | $31 / 2$ | $31 / 2$ | $31 / 4$ |

## BAR AND SHEET LEAD.

Weight in Pounds.

| Thickness or Diameter or Side, Inch. | Sheets per Square Foot. | Square Bars 1 Foot Long. | Round Bars 1 Foot Long. | Thickness or Diameter, or Side, Inches. | Sheets per Square Foot. | Square Bars 1 Foot Long. | Round Bars 1 Foot Long. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1/16 | 3.71 | . 020 | . 014 | 1/1/6 | 63.20 | 5.60 | 4.40 |
| $1 / 8$ | 7.43 | . 079 | . 060 | $11 / 8^{1 / 6}$ | 66.87 | 5. 26 | 4.91 |
| 3/16 | 11.00 | 175 | . 136 | $13 / 1$ | 70.51 | 6.98 | 5.50 |
| $1 / 4$ | 14.80 | . 310 | . 245 | $11^{1 / 4}$ | 74.35 | 7.74 | 6.10 |
| $5 / 16$ | 18.05 | . 486 | . 380 | 15/16 | 78.05 | 8.55 | 6.73 |
| 3/8 | 22.20 | . 695 | . 549 | $13 / 8{ }^{1}$ | 84.76 | 9.38 | 7.38 |
| 7/16 | 26.00 | 948 | . 745 | 17/16 | 85.48 | 10.18 | 8.05 |
| 1/2 | 29.75 | 1.250 | . 975 | $11 / 2{ }^{1 / 6}$ | 89.28 | 11.00 | 8.75 |
| $9 / 16$ | 33.49 | 1.550 | 1.240 | $19 / 16$ | 93.00 | 12.05 | 9.50 |
| 5/8 | 37.18 | 1.950 | 1.510 | $15 / 8$ | 96.78 | 13.15 | 10.25 |
| 11/16 | 40.87 | 2.330 | 1.850 | $1^{11 / 1} 6$ | 100.50 | 14.15 | 11.06 |
| $3 / 4$ | 44.58 | 2.800 | 2.200 | $13 / 4{ }^{16}$ | 104.10 | 15.18 | 11.88 |
| $13 / 16$ | 48.28 | 3.280 | 2.580 | $113 / 16$ | 107.80 | 16.30 | 12.76 |
| $7 / 8$ | 52.12 | 3.800 | 2.980 | $17 / 8$ | 112.30 | 17.45 | 13.66 |
| 15/16 | 5605 | 4.350 | 3.410 | $1^{15 / 56}$ | 116.00 | 18.10 | 14.61 |
| 1 | 59.48 | 4.950 | 3.900 | $2^{16}$ | 119.60 | 19.78 | 15.58 |

## COPPER RIVETS AND BURRS.

## Number in One Pound.

| Length, inches........ | $1 / 4$ | $3 / 8$ | $1 / 2$ | $5 / 8$ | $3 / 4$ | $7 / 8$ | 1 | $11 / 8$ | $11 / 4$ | $11 / 2$ | Burrs |  |
| ---: | ---: | ---: | :---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: | ---: |
| No. | $\mathbf{8} \ldots \ldots \ldots \ldots \ldots \ldots$ | 266 | 227 | 172 | 147 | 136 | 116 | 100 | 93 | 88 | 71 | 417 |
| " | $\mathbf{9} \ldots \ldots \ldots \ldots \ldots \ldots$ | 365 | 261 | 228 | 184 | 169 | 156 | 133 | 124 | 113 | 99 | 600 |
| " | $\mathbf{1 0} \ldots \ldots \ldots \ldots \ldots \ldots$ | 411 | 236 | 257 | 223 | 206 | 180 | 162 | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots$ | 820 |
| " | $\mathbf{1 2} \ldots \ldots \ldots \ldots \ldots$. | 545 | 400 | 325 | 292 | 257 | 221 | 190 | $\ldots \ldots$ | $\ldots \ldots$ | $\ldots$ | 1167 |

## MELTING POINT OF METALS.



FLUXES FOR BRAZING AND SOLDERING.


## VALUABLE <br> PRACTICAL RECEIPTS AND COMPOSITIONS.

Tinsmiths' Solder.-Tin, one pound; lead, one pound.
Plumbers' Solder.-Tin, two pounds; lead, five pounds.
Hard Solder.-Copper, one pound; zinc, eight ounces.
Solder for Gold.-Gold, three pounds; silver, one pound; copper, one pound.
Solder for Silver.-Copper, two pounds; silver, one ounce; sheet brass, fifteen pounds.
Solder for Britannia.--Tin, seven pounds; lead, four pounds.
Yellow Solder.-Copper and zinc, equal parts.
Black Solder.-Copper, two pounds; zinc, two pounds; tin, four ounces.
Yellow Brass.-Zinc, ten pounds; lead, four ounces; copper, twenty-four pounds.
Red Brass.-Zinc, five pounds; lead, eight ounces; copper, twenty-four pounds.
Bronze Metal.-Zinc, two pounds; tin, one pound; copper, four pounds.
Britannia Metal.-Antimony, one pound; tin, one hundred pounds; copper, two pounds.
Silver-Colored Metal.-Tin, fifty pounds; bismuth, one pound; antimony, three pounds; copper three pounds.

German Silver.-Zinc, five pounds; copper, fourteen pounds; nickel, six pounds.
Imitation Silver.-Copper, four pounds; zinc, four ounces.
Pinchbeck.-Zinc, one pound; copper, four pounds.
Tombac.-Tin, one pound; zinc, one pound; copper, fifteen pounds.
White Metal.-Copper, five pounds; zinc, three pounds; lead, one pound; tin, one pound.
Metal for Taking Impressions.-Bismuth, three pounds; lead, one pound; tin, eight ounces.
Rivet Metal.-Tin, five pounds; zinc, two pounds; copper, ten pounds.
Fusible Alloy (which melts in hot water).-Bismuth, six ounces; tin, two ounces; lead, three ounces.

A Metal that Extends in Cooling.-Lead, nine parts; antimony, two parts; bismuth, four parts.
Tinning Acid for Brass and Copper.-Muriatic acid, one pound; give it all the zinc it will dissolve; add four ounces sal ammoniac, one pint water.

For Tinning Brass.- Water, four gallons; salt, one pint; cream tartar, one pound.
Mixture for Silvering Metals.--Dissolve two ounces of silver in three grains of corrosive sublimate; add salt, eight quarts; tartaric acid, four pounds.

To Separate Silver from Copper.-Sulphuric acid, one part; nitric acid, one part; water, one part; then boil the metal in the mixture until it dissolves; add a little salt, and the silver will subside.

Speculum Metal.-Copper, four pounds; tin, one pound; zinc, eight ounces.
Common Pewter.-Tin, four pounds; lead, one pound.
Queen's Metal.-Tin, nine pounds; antimony, one pound; lead, one pound; bismuth, one pound.
Mock Platinum.-Copper, four pounds; zinc, eighteen pounds.
Mock Gold.-Copper, sixteen pounds; platinum, seven pounds; zinc, one pound.
Mankin Gold.-Copper, three pounds; zinc, one pound; tin, four ounces.
Type Metal.-Lead, nine parts; antimony; two parts; bismuth, two parts; Chinese silver, two and five-tenths parts; copper, sixty-five and one-quarter parts; zinc, nineteen and one-half parts; nickel, thirteen parts; cobalt of iron, one-eighth part.

Chinese White.-Copper, forty and four-tenths parts; nickel, thirty-one and six-tenths parts; zinc, twenty-five and four-tenths parts; iron, two and six-tenths parts.

Cement for Stopping Holes in Cast-Iron. - Iron filings, fifteen parts; sal ammoniac, two parts; sulphur, one part; ground or powdered stone, two parts; add water until it is about the consistency of common paste; it is then ready for use.

Acid for Soldering Tin.-Muriatic acid, one part; add all the zinc it will dissolve; then add two parts water and a little sal ammoniac.

Acid for Soldering Brass and Copper. - Muriatic acid, one pound; zinc, four ounces; sal ammoniac, five ounces.

Acid for Soldering Zinc.-Muriatic acid, one pound; sal ammoniac, two ounces; all the zinc it will dissolve; water, three pints.

Acid for Soldering Iron.-Muriatic acid, one pound; sperm tallow, six ounces; sal ammoniac, four ounces.

Acid for Soldering Gold and Silver.-Muriatic acid, one pound; sperm tallow, eight ounces; sal ammoniac, eight ounces.

## Practical Receipts and Compositions-Continued.

Cement for Coppersmiths.-Boiled linseed oil and red lead, mixed to the consistency of putty, is a good cement for stopping joints and cracks in copper pipe.

Cement, Invisible, for Glass, China, Earthen and Stoneware.-India-rubber, one part; chloroform, sixty parts; white shellac, six parts; gum mastic, twenty parts; shake frequently for two or three days and it will be ready for use.

Cement for Joining Metals to Wood, Leather and Glass.-Rosin, fifty parts; burnt umber, ten parts; calcined plaster, five parts; a little boiled oil improve; it.

Cement for Joining Files.-Gum shellac, two parts; powdered chalk, one part; powdered and mixed. Place the cement on one end of the file, heat the other, press them firmly together and let them cool gradually.

Powder for Silvering Metals.-Nitrate of silver, ten parts; common salt, ten parts; cream tartar, thirty parts: moisten with water and apply.

Sealing Wax for Fruit Cans.-Beeswax, one part; rosin, ten parts; gum shellac, one part, coloring, according to taste; melt the rosin and beeswax at a low heat, then add the gum shellac, and last of all the coloring. If the cans are to be handled often, less rosin and more beeswax should be used.

To Coat Brass or Copper Vessels with Tin.-Boil the vessels in a solution of tin filings and chlorate of potassa, and they will in a few minutes become perfectly tinned. Care should be taken to have the vessels perfectly clean, otherwise the operation will be imperfectly performed.

Reliable Paste for Sticking on Tin.-To eight ounces flour, four ounces brown sugar, one ounce bicarb-soda, add five ounces cold water. Mix the above thoroughly until free from lumps. Then add one and one-half pounds boiling water and cook for a short time, continuously stirring. After the paste is made, and while still hot, add one-half ounce sulphuric acid.

Parting Sand.-Burnt sand scraped from the surface of castings.
Loam.-Mixture of brick, clay and old foundry sand.
Blackening for Moulds.-Charcoal powder; or, in some instances fine coal dust.
Black Wash.-Charcoal, plumbago and size.
Mixture for Welding Steel.-One sal ammoniac, ten borax, pounded together and fused until clear, when it is poured out, and after cooling, reduce to powder.

Rust-Joint Cement. (Quickly setting). One sal ammoniac in powder (by weight), two flour of sulphur, eighty iron borings made to paste with water.

Rust-Joint. (Slowly setting). Two sal ammoniac, one flour of sulphur, two hundred iron borings. The latter cement is the best if the joint is not required for immediate use.

Red-Lead Cement for Face Joints.-One of white lead, one of red lead mixed with linseed oil to the proper consistency:

Case-Hardening.-Place horn, hoof, bone-dust or shreds of leather together with the article to be case hardened, in an iron box subject to a blood-red heat, then immerse the article in cold water.

Case-Hardening with Prussiate of Potash.-Heat the article, after polishing, to a bright red, rub the surface over with prussiate of potash; allow to cool to dull red and immerse it in water.

Case-Hardening Mixtures. - Three prussiate of potash, one sal ammoniac, or, one prussiate of potash, two sal ammoniac, two bone-dust.

Glue to Resist Moisture.-One pound of glue melted in two quarts of skim milk.
Marine Glue.-One of india-rubber, twelve of mineral naphtha or coal tar. Heat gently, mix, and add twenty of powdered shellac. Pour out on a slab to cool. When used, to be heated to about two hundred and fifty degrees.

Glue Cement to Resist Moisture.-One glue, one black rosin, one-fourth red ochre, mixed with least possible quantity of water, or, four of glue or one oxide of iron, one of boiled oil (by weight).

To Remove Rust From Steel.-Steel which has been rusted can be cleaned by brushing with a paste compound of one-half ounce cyanide potassium, one-half ounce castile soap, one ounce whiting, and water sufficient to form a paste. The steel should be washed with a solution of one-half ounce cyanide potassium in two ounces water.

To Preserve Steel from Rust.-One caoutchouc, sixteen turpentine. Dissolve with a gentle heat, then add eight parts boiled oil. Mix by bringing them to the heat of boiling water; apply to the steel, with a brush, in the way of varnish. It may be removed with turpentine.

To Clean Brass.-One roche alum and sixteen water. Mix. The article to be cleaned must be made warm, then rubbed with the above mixture and finished with fine tripoli.

## MATERIALS AND LABOR PER SQUARE OF TIN ROOF.

A box of tin plate $14 \times 20$ will lack five sheets of covering two squares; or 58 sheets will cover one square. For less than one square the quantity required may be roughly estimated by allowing 6 sheets for every 10 square feet.

Calculations of materials, labor, etc., are not made by the boxes of tin used, but by the number of squares ( 10 feet by 10 feet) of roof to be covered. Four pounds of solder and a pound and a half of roofing nails can generally be allowed to each square in an estimate. A good man will lay from two to three squares, according to his industry and expertness, the weather and other conditions. Two and a half squares a day is probably as large a general average per man as can be counted upon.

The following four tables will be found of practical value by tinners in calculating the number of boxes of tin needed to cover a given area of roof.

## $14 \times 20$ Flat Seam Roofing.

Table showing the square feet of "flat seam" roof for any number of sheets of $14 \times 20$ tin plate from 1 to 1000 ; also, showing the number of sheets of $14 \times 20$ tin plate required to lay any given "flat seam"' roof, varying in size from 2 feet to 1715 feet. Size of tin, $14 \times 20$; edged, $13 \times 19$; square inches exposed, 247 ; sheets per box, 112.

| No Sheets. | Square Feet. | No. Sheets. | $\begin{aligned} & \text { Square } \\ & \text { Feet. } \end{aligned}$ | No. Sheets. | Square Feet. | No. Sheets | Square Feet. | No. Sheets. | Square Feet. | No. Sheets. | Square <br> Feet. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 20 | ... 34 | 38 | . 65 | 56 | .. 96 |  | .. 127 | 92 | .. 158 |
|  | . 3 | 21 | .. 36 | 39 | .... 67 |  | .. 98 |  | .. 129 |  | .. 160 |
|  | . 5 | 22. | .. . 38 | 40 | .. 69 | 58 | .. 99 |  | . 130 | 94 | .. 161 |
|  | 7 | 23 ... | .... 39 | 41. | .. 70 |  | .. 101 |  | . 132 | 95 | .. 163 |
|  | . 9 | 24. | ... 41 | 42. | .. 72 |  | . 103 |  | . 134 | 96 | .. 165 |
| 6 | . 10 | 25 ... | .. 43 | 43. | ... 74 |  | . 105 |  | . 136 | 97. | .. 166 |
|  | . 12 | 26 ... | ... 45 | 44. | ... 75 | 62. | . 106 | 80 | . 137 | 98. | . 168 |
| 8 | . 14 | 27. | .. 46 | 45. | . 77 | 63. | . 108 |  | . 139 | 99 | .. 170 |
| 9 | . 15 | 28 ... | .. 48 | 46. | .. 79 | 64. | . 110 |  | . 141 | 100 | .. 172 |
| 10 | . 17 | $29 \ldots$ | ... 50 | 47. | ... 81 |  | . 111 |  | . 142 | 200. | . 343 |
| 11 | . 19 | 30. | .. 51 | 48. | . 82 |  | .. 113 | 84 | . 144 | 300 | . 515 |
| 12 | . 21 | 31. | .... 53 | 49 | . 84 |  | . 115 | 85 | . 146 | 400 | . 686 |
| 13 | . 22 | $32 .$. | .. 55 | 50. | .. 86 | 68. | . 117 |  | . 148 | 500 | . 858 |
| 14 |  | 33. | ... 57 |  |  |  | . 118 |  | . 149 | 600. | .. 1029 |
|  |  | $34 .$. | .. 58 |  |  |  | . 120 |  | . 151 | 700 | . 1201 |
| 16 |  | 35. | .. 60 | 53 ... |  |  | . 122 |  | . 153 | $800 .$. | . 1372 |
| 17 | ... 29 | 36 | .. 62 | 54. |  | 72 | . 124 |  | . 154 | $900 .$. | . 1544 |
| 18 |  | 37 | .... 63 | 55. | .... 94 | 73. | . 125 | 91. | .. 156 | 1000 ... | . 1715 |
| 19 .. | .. 33 |  |  |  |  |  |  |  |  |  |  |

## $14 \times 20$ Standing Seam Roofing.

Table showing the square feet of "standing seam" roof for any number of sheets of $14 x 20$ tin plate from 1 to 1000 ; also, showing the number of sheets of $14 \times 20$ tin plate required to lay any given "standing seam" roof, varying in size from 2 feet to 1602 feet. Size of tin, $14 \times 20$; exposed on roof, $13 \times 173 / 4$; square inches exposed, $2003 / 4$; sheets per box, 112 .


## Materials and Labor per Square of Tin Roof-Continued.

## $20 \times 28$ Flat Seam Roofing.

Table showing the square feet of "flat seam" roof for any number of sheets of 20 x 28 tin plate from 1 to 1000 ; also, showing the number of sheets of $20 \times 28$ tin plate required to lay any given "flat seam" roof varying in size from 4 feet to 3562 feet. Size of tin, 20x28; edged, 27x19; square inches exposed, 513 ; sheets per box, 112 .


## $20 \times 28$ Standing Seam Roofing.

Table showing the square feet of "standing seam" roof for any number of sheets of $20 \times 28$ tin plate from 1 to 1000 ; also, showing the number of sheets of $20 \times 28$ tin plate required to lay any ioven "standing seam" roof, varying in size from 3 feet to 3328 feet. Size of tin, 20x28; exposed n groof, $27 \times 173 / 4$; square inches exposed, $479 \frac{1}{2}$; sheets per box, 112 .

| No. Sheets. | Square Feet. | No. Sheets. | Square Feet. | No. Sheets. | Square Feet. | No. Sheets. | Square Feet. | No. Sheets. | Square Feet. | No. Sheets. | Square Feet. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1 . .$. | .. 3 | 20. | .. 67 |  | ... 126 |  | . 186 | 74 | .. 246 |  | ... 306 |
| 2 ..... | .. 7 | 21. | .. 70 |  | . 130 |  | . 190 |  | . 250 |  | ... 309 |
| 3 ...... | .. 10 | 22. | . 73 | 40 | . 133 | 58 | . 193 |  | . 253 | 94. | .. 313 |
| 4 ..... | .. 13 | 23. | . 77 | 41 | . 136 | 59 | . 196 | 77 | . 256 | 95. | .. 316 |
| 5 ... | . 17 | 24. | . 80 | 42 | . 140 |  | . 200 |  | . 259 | 96. | ... 319 |
| 6 ... | . 20 | 25.... | . 83 |  | . 143 | 61 | . 203 | 79 | . 263 | 97. | ... 323 |
| 7 | . 23 | 26... | . 86 |  | . 146 |  | . 206 |  | . 266 | 98. | ... 326 |
| 8 ..... |  | $27 .$. | . 90 | 45. | . 150 | 63 | . 210 | 81 | . 269 | 99. | ... 329 |
| 9 ... | .. 30 | 28. | . 93 |  | ... 153 |  | ... 213 |  | . 273 | 100. | ... 333 |
| 10 | .. 33 | 29. | 96 | 47 ... | . 156 |  | . 216 |  | . 276 | 200 | ... 656 |
| 11 | . 37 | 30. | . 100 |  | ... 160 |  | ... 220 |  | . 280 | 300 | ... 998 |
| 12 | .. 40 | 31. | . 103 |  | . 163 |  | . 223 |  | . 283 | 400 | ... 1331 |
|  |  | 32. | . 106 |  | ... 166 |  | ... 226 |  | . 286 | 500 | . 1664 |
| 14. | ... 47 | 33. | . 110 | 51. | . 170 |  | . 230 |  | . 289 | 600 | . 1997 |
|  |  | 34. | . 113 |  | .. 173 |  | ... 233 | 88 | .. 293 | 700 | . 2330 |
| 16 |  | 35. | . 116 | 53 ... | . 176 |  | . 236 |  | . 296 | 800 | . 2662 |
| 17 |  | 36. | . 120 | 54 ... | ... 180 |  | . 240 |  | . 300 | 900 | . 2925 |
| 18. |  | 37.... | . 123 | 55 ... | . 183 | 73 .. | . 243 | $91 .$. | . 303 | 1000 | . 3328 |
| $19 \ldots$ | ... 63 |  |  |  |  |  |  |  |  |  |  |

One box ( 112 sheets, $14 \times 20$ ) roofing tin will cover 170 square feet, allowing 1 inch for lock and $11 / 4$ inches on each side of the sheet for standing groove.

One box ( 112 sheets, $20 \times 28$ ) will cover 360 square feet, after making same allowance for lock and groove.

## SQUARE MEASURE.

| Inches. |  | Feet. Yards. Pole |  |  |  |
| ---: | :--- | ---: | :--- | :---: | :---: |
| or Perch. |  |  |  |  |  | Rood. Acre.

An acre is 69.57 yards square, or 208.7 feet square. A circular acre is 235.504 feet in diameter. An acre is 1000 links square, or 10 square chains.

A township is 6 miles square $=36$ sections.
'A section is 1 mile square $=640$ acres.
$1 / 4$ section is $1 / 2$ mile square $=160$ acres.
$1 / 16$ section is $1 / 4$ mile square $=40$ acres.

## CUBIC MEASURE.

| Cubic |  | Cubic | Cubic. |
| ---: | ---: | ---: | ---: |
| Inches. | Feet. | Yard. |  |
| 1728 | $=$ | 1 |  |
| 46656 | $=$ | $27=1$ |  |

A cubic foot of water weighs $621 / 2$ pounds.
A cubic foot of water contains $71 / 2$ gallons.

## WOOD AND STONE MEASURE.

Cubic Feet.

$$
\begin{aligned}
16 & =2 \text { Cord Feet } \\
128 & =8 \text { Cord Feet }=1 \text { Cord } \\
243 / 4 & =1 \text { Perch Masonry } \\
96 & =1 \text { Cord of Stone Masonry }
\end{aligned}
$$

## GUNTER'S CHAIN.

| Inches. | Links. $\quad$ Chains. Mile. |  |
| :---: | :---: | :---: |
| 7.92 | $=$ | 1 |
| 792.00 | $=100=1$ |  |
| 63360.00 | $=8000=80=1$ |  |

A Gunter's Chain is 66 feet long.

## LONG MEASURE.

| Inches. |  | Feet. | Yards. |
| ---: | :--- | ---: | :--- | Fathoms. $\quad$ Rods. Furlongs. Mile.

A degree $=691 / 6$ miles.

## NAUTICAL MEASURE.



60 nautical or geographical miles $=1$ degree $=69.16$ English miles.

## MISCELLANEOUS.

12 lines $=1$ inch
3 barleycorns $=1$ inch.
3 inches $=1$ palm.
4 inches $=1$ hand.
18 inches $=1$ cubit.

240 yards $=1$ cable's length
20 articles $=1$ score.
12 dozen $=1$ gross.
12 gross $=1$ great gross.

INCHES AND THEIR EQUIVALENT DECIMAL VALUES IN PARTS OF A FOOT.

| Inches. | Fraction of ${ }^{\top}$ Foot. | Decimals <br> Part of Foot. | Inches. | Fraction of Foot. | Decimals Part of Foot. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1/12 | . 0833 | 7 | 7/12 | . 5833 |
| 2 | 1/6 | . 1667 | 8 | 2/3 | . 6667 |
| 3 | $1 / 4$ | . 25 | 9 | 3/4 | . 75 |
| 4 | $1 / 3$ | . 3333 | 10 | 5/6 | . 8333 |
| 5 | $512$ | . 4167 | 11 | $11 / 12$ | .9167 |
| 6 | 1/2 | . 5 | 12 | 1 | 1.0 |

FRACTIONAL PARTS OF AN INCH AND THEIR EQUIVALENT DECIMAL VALUES IN PARTS OF A FOOT.

| Fractions of Inch. | Decimals of Foot. | Fractions of Inch. | Decimals of Foot. | Fractions of Inch. | Decimals of Foot. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1/16 | 0052 |  | . 0365 |  | . 0677 |
| 1/8 | 0104 | $\begin{aligned} & 716 \\ & 1 / 2 \end{aligned}$ | . 0417 | 7/8 | .0729 |
| 3/16 | 0156 | 16 | . 0469 | 15/16 | .0781 |
| 1/4 | . 0208 | 5/8 | . 0521 | 1 | . 0833 |
| 5/16 | . 0260 | $11 / 16$ | . 0573 | ...... | ...... |
| $3 / 8$ | . 0313 | 3/4 | 0625 | ...... | $\ldots . .$. |

## LIQUID OR WINE MEASURE.

| Gills. |  | $\begin{gathered} \mathrm{Cu} . \mathrm{In} . \\ 7.2 \end{gathered}$ | Pints. |  | Quarts. |  | Gallons. | Ho | shead. | Pipe. | Tun. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | $=$ | $28.875=$ | 1 |  |  |  |  |  |  |  |  |
| 8 | $=$ | $57.75=$ | 2 | $=$ | 1 |  |  |  |  |  |  |
| 32 | $=$ | $231.00=$ | 8 | $=$ | 4 | $=$ | 1 |  |  |  |  |
| 2016 | $=$ | $\ldots . . .=$ | 504 | $=$ | 252 | $=$ | 63 | $=$ | 1 |  |  |
| 4032 | $=$ | $\ldots . . .=$ | 1008 | $=$ | 504 | $=$ | 126 | = | $2=$ |  |  |
| 8064 | $=$ | $\ldots . . .=$ | 2016 | $=$ | 1008 | $=$ | 252 | $=$ | $4=$ | 2 |  |

## DRY MEASURE.

```
Pints. Cubic Inches. Quarts. Gallons. Pecks. Bushel.
    1= 56.6
    2 = 67.2 = 1
    8=268.8=4=1
    16=537.6=8=2=1
    64=\ldots\ldots.. = 32=8=4=1
```

A bushel $=2150.42$ cubic inches. A cubic foot $=.8$ bushel.
To find the capacity of a Bin in bushels, multiply number of cubic feet by .8 , and the result is the number of bushels.

## AVOIRDUPOIS WEIGHT.



An ounce $=437.5$ grains Troy. A pound $=1.2153$ pounds Troy.

## TROY WEIGHT.

Grains. | Penny- |
| :---: |
| weights. | Ounces. Found.

$24=1$
$480=20=1$
$5760=240=12=1$

A pound Troy=22.816 cubic inches of distilled water.

## APOTHECARY'S WEIGHT.

| Grains. | Scruples. Drams. Ounces. Pound. |
| ---: | ---: | ---: | ---: |
| 20 | $=1$ |
| 60 | $=3=1$ |
| 430 | $=24=8=1$ |
| 5760 | $=288=96=12=1$ |

## APOTHECARY'S MEASURE.

| Minims. | Fluid <br> Drams. |
| ---: | :--- |
| 60 | $=1$ | | Fluid |
| :---: |
| Ounces. | Pints. Galion.

## METRIC MEASURES OF LENGTH.

Millimetres. Centimetres. Decimetres. Metres. Dekametres. Hectometres. Kilometres. Myriametres.


## METRIC MEASURES OF SURFACE.

A table of metric measures of surface is obtained from the foregoing table by squaring the numbers, and placing the word "square" before each of the names, thus 100 square millimetres $=1$ square centimetre.

Some Common Metric Denominations.
$\begin{array}{llrl}\text { Hectare } & = & 10,000 \text { square metres } & = \\ \text { Are } & = & 100 \text { square metres } & =119.6 \text { square yards. } \\ \text { Centare } & = & 1 \text { square metre } & =10.7643 \text { square feet }\end{array}$

## METRIC MEASURES OF CAPACITY.

| Milliter. |  | Centiliter. |  | Deciliter. |  | Liter. |  | kalit | He | tol |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | $=$ | 1 |  |  |  |  |  |  |  |  |  |  |
| 100 | $=$ | 10 | $=$ | 1 |  |  |  |  |  |  |  |  |
| 1,000 | = | 100 | $=$ | 10 | $=$ | 1 |  |  |  |  |  |  |
| 10,000 | $=$ | 1,000 | = | 100 | $=$ | 10 | $=$ | 1 |  |  |  |  |
| 100,000 | $=$ | 10,000 | $=$ | 1,000 | $=$ | 100 | $=$ | 10 | $=$ | 1 |  |  |
| 1,000,000 | $=$ | 100,000 | $=$ | 10,000 | $=$ | 1,000 | $=$ | 100 | $=$ | 10 | $=$ |  |


|  | Dry Measure. |  |  |  | Wine Measure. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 Milliter | = | . 061 | cubic inches |  | . 27 | fluid drams |
| 1 Centiliter | = | 0.6102 |  |  | 338 | fluid ounces |
| 1 Deciliter | $=$ | 6.102 | " ${ }^{\text {، }}$ |  | 0.845 | gill |
| 1 Liter | = | 0.908 | quarts |  | 1.0567 | quarts |
| 1 Dekaliter | $=$ | 9.08 |  |  | 2.6417 | gallons |
| 1 Hektoliter | $=$ | 2. | bushels and | 3.35 pecks | 26.417 |  |
| 1 Kiloliter | = | 1.308 | cubic yards |  | 264.17 | ، |

## METRIC MEASURES OF WEIGHT.

Milligram.
Centigram.
$10=$ $100=\quad 10=$ $1,000=\quad 100=$ $10,000=\quad 1,000=$ $100,000=\quad 10,000=$ $1,000,000=100,000=$ $10,000,000=1,000,000=100,000=10,000=1,000=100=10=1$ $100,000,000=10,000,000=1.000,000=100,000=10,000=1,000=100=10=$ $1,000,000,000=100,000,000=10,000,000=1,000,000=100,000=10,000=1,000=100=10=1$

|  | Avoirdupois Weight. |  | Quantity of Water. |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1 Milligram | $=$ | .0154 |  |  |
| grains | .001 | milliter |  |  |

A Kilogram is commonly called a Kilo.

## TABLE FOR FACILITATING APPROXIMATE CALCULATIONS FROM THE METRIC TO THE ENGLISH SYSTEM OF WEIGHTS AND MEASURES.

| Feet. | Metres. | Feet. | Metres. | Pounds, Avoirdupois. | Kilograms. | Pounds, Avoirdupois. | Kilograms. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 0.30 | 3.28 | 1 | 1 | 0.45 | 2.20 | 1 |
| 2 | 0.61 | 6.56 | 2 | 2 | 0.91 | 4.41 | 2 |
| 3 | 0.91 | 9.84 | 3 | 3 | 1.36 | 6.61 | 3 |
| 4 | 1.22 | 13.12 | 4 | 4 | 1.81 | 8.82 | 4 |
| 5 | 1.52 | 16.40 | 5 | 5 | 2.26 | 11.02 | 5 |
| 6 | 1.83 | 19.69 | 6 | 6 | 2.72 | 13.23 | 6 |
| 7 | 2.13 | 22.97 | 7 | 7 | 3.18 | 15.43 | 7 |
| 8 | 2.44 | 26.25 | 8 | 8 | 3.62 | 17.64 | 8 |
| 9 | 2.74 | 29.53 | 9 | 9 | 4.08 | 19.84 | 9 |


| U. S. Gallons. | Imperial <br> Gallons. | Litres. | Cubic Metres. | U. S. Gallons. | Imperial Gallons. | Litres. | Cubic Metres. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 0.83 | 3.79 | 0.0038 | 1.20 | 1 | 4.54 | 0.0045 |
| 2 | 1.67 | 7.57 | 0.0076 | 2.40 | 2 | 9.08 | 0.0091 |
| 3 | 2.50 | 11.36 | 0.0114 | 3.60 | 3 | 13.63 | 0.0136 |
| 4 | 3.33 | 15.14 | 0.0151 | 480 | 4 | 18.17 | 0.0182 |
| 5 | 4.17 | 18.93 | 0.0189 | 6.00 | 5 | 22.71 | 0.0227 |
| 6 | 5.00 | 22.71 | 0.0227 | 7.20 | 6 | 27.26 | 0.0273 |
| 7 | 5.83 | 26.50 | 0.0265 | 8.40 | 7 | 31.80 | 0.0318 |
| 8 | 5.66 | 30.38 | 0.0303 | 9.60 | 8 | 36.34 | 0.0363 |
| 9 | 7.50 | 34.07 | 0.0341 | 10.80 | 9 | 40.89 | 0.0409 |


| U. S. Gallons. | Imperial Gallons. | Litres. | Cubic Metres. | Miles. | Kilometres. | Miles. | Kilometres. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.26 | 0.22 | 1 | 0.001 | 1 | 1.61 | 0.62 | 1 |
| 0.53 | 0.44 | 2 | 0.002 | 2 | 3.22 | 1.24 | 2 |
| 0.79 | 0.66 | 3 | 0.003 | 3 | 4.83 | 1.86 | 3 |
| 1.05 | 0.88 | 4 | 0.004 | 4 | 6.44 | 2.49 | 4 |
| 1.32 | 1.10 | 5 | 0.005 | 5 | 8.05 | 3.11 | 5 |
| 1.58 | 1.32 | 6 | 0.006 | 6 | 9.66 | 3.73 | 6 |
| 1.85 | 1.54 | 7 | 0.007 | 7 | 11.27 | 4.35 | 7 |
| 2.11 | 1.76 | 8 | 0.008 | 8 | 12.87 | 4.97 | 8 |
| 2.38 | 1.98 | 9 | 0.009 | 9 | 14.48 | 5.59 | 9 |

## MENSURATION OF SURFACES.

Area of any parallelogram=base multiplied by perpendicular height.
Area of any triangle=base multiplied by $1 / 2$ perpendicular height.
Area of any circle=diameter squared, multiplied by .7854.
Area of sector of circle=are multiplied by $1 / 2$ of radius.
Area of segment of circle=area of sector of equal radius, less area of triangle.
Area of parabola=base multiplied by $2 / 3$ of height.
Area of ellipse $=$ longest diameter multiplied by shortest diameter, multiplied by .7854 .
Area of cycloid=area of generating circle multiplied by 3 .
Area of any regular polygon=sum of its sides multiplied by perpendicular from its center to one of its sides divided by 2 .

Surface of cylinder=area of both ends plus length multiplied by circumference.
Surface of cone=Area of base plus circumference of base multiplied by $1 / 2$ slant height.
Surface of sphere=diameter squared, multiplied by 3.1416.
Surface of frustum=sum of girt at both ends multiplied by $1 / 2$ slant height plus area of both ends.
Surface of cylindrical ring=thickness of ring added to the inner diameter multiplied by the thickness, multiplied by 9.8698 .

Surface of segment $=$ height of segment multiplied by whole circumference of sphere of which it is a part.

## PROPERTIES OF THE CIRCLE.

Circumference of a circle=diameter multiplied by 3.1416 .
Circumference of a circle=radius multiplied by 6.2832 .
Circumference of an oval $=1 / 2$ sum of two diameters multiplied by 3.1416 .
Side of an equal square $=$ diameter multiplied by . 8862 .
Side of an inscribed square $=$ diameter multiplied by .7071 .
Area of a circle=diameter squared, multiplied by . 7854.
Diameter of a circle=circumference divided by 3.1416.
The circle contains a greater area than any plane figure bounded by an equal perimeter or outline.

The areas of circles are to each other as the squares of their diameters.
Any circle whose diameter is double that of another contains four times the area of the other.
Area of a circle is equal to the area of a triangle whose base equals the circumference, and perpendicular equals the radius.

## MENSURATION OF SOLIDS.

Cylinder's contents=area of one end multiplied by length.
Sphere's contents=cube of diameter multiplied by . 5236 .
Segment of sphere $=$ square root of height added to three times the square of radius of base multiplied by height and by . 5236 .

Cone or pyramid=area of base multiplied by $1 / 3$ perpendicular height.
Frustum of a cone=product of diameter of both ends plus sum of their squares multiplied by perpendicular height, multiplied by . 2618.

Solidity of a wedge=-area of base multiplied by $1 / 2$ perpendicular height.
Frustum of a wedge $=1 / 2$ perpendicular height multiplied by sum of the areas of the two ends
Solidity of a ring=thickness plus inner diameter multiplied by square of the thickness, multiplied by 2.4674 .

## HYDROSTATIC TABLES.

1 cubic inch of water weighs .03617 pounds.
1 cubic foot of water weighs 62.46 pounds.
1 gallon of water weighs $81 / 3$ pounds.
1 gallon of water contains 231 cubic inches.
1 cubic foot of water contains $71 / 2$ gallons.
1 cubic foot of water contains 1728 cubic inches.
Valuable Formulae.-From the foregoing rules and equivalents may be deduced the following Concise Formulæ for computing the Capacity, Required Power, and Speed of Pumps:

Let
$\mathrm{D}=$ diameter of pump cylinder in inches.
$\mathrm{S}=$ =length of stroke in inches.
$\mathrm{N}=$ number of strokes per minute.
$Q=$ quantity of water raised per minute in gallons.
$\mathrm{H}=$ height in feet water is elevated from surface, or height of column of water.
Then
$\mathrm{D}^{2} \times .7854=$ the area of a circle (of cylinder) of a given diameter.
$\mathrm{D}^{2} \mathrm{~S} \times .7854=$ capacity of pump per stroke in cubic inches.
$\frac{\mathrm{D}^{2} \mathrm{~S} \times .7854}{231}=$ capacity of pump per stroke in gallons.
$\frac{\mathrm{D}^{2} \mathrm{~S} \times .7854}{1728}=$ capacity of pump per stroke in cubic feet.
$\frac{\mathrm{D}^{2} \mathrm{~S} \times .7854 \times 8.355}{231}=$ capacity of pump per stroke in pounds of water.
$\mathrm{D}^{2} \mathrm{~S} \times .7854 \mathrm{~N}=$ capacity of pump per miuute in cubic inches.
$\mathrm{D}^{2} \mathrm{~S} \times .7854 \mathrm{~N}$
$231=$ capacity of pump per minute in gallons $=(Q)$.
$\frac{\mathrm{D}^{2} \mathrm{~S} \times .7854 \mathrm{~N}}{1728}=$ capacity of pump per minute in cubic feet.
$\frac{\mathrm{QH} \times 8.355}{33,000}=$ horse power required to elevate a given quantity of water per minute to a certain
$\mathrm{H} \times .434=$ pounds pressure (per square inch) of a column of water.

A miner's inch of water is approximately equal to a supply of 12 gallons per minute.
The friction of water in pipes increases with the square of its velocity.
The capacity of pipes increases with the square of their diameter. Thus, doubling the diameter increases the capacity four times.

## APPROXIMATE NUMBER OF CUBIC FEET OF AIR ONE SQUARE FOOT OF RADIATOR <br> WILL HEAT.

| One Square Foot of Radiator Surface Will Heat With | In Dwellings, School Rooms, Offices, Etc. | In Halls, Stores, Lofts, Factories, Etc. | In Churches, Large Auditoriums, Etc. |
| :---: | :---: | :---: | :---: |
| Direct steam radiation. | 60 to 80 Cubic Ft. | 75 to 100 Cub . Ft. | 150 to $200 \mathrm{Cub} . \mathrm{Ft}$. |
| Indirect steam radiation | 40 " 50 " | 50 " 70 | 100 " 140 " |
| High temperature direct hot water radiation. | 50 " 70 | 65 " 90 | 130 " 180 " |
| Low temperature clirect hot water radiation.. | 30 " 50 | ، 35 " 65 | 70 " 150 " |
| High temperature indirect hot water radiation.. | 30 " 60 | "35 " 75 " | 70 " 150 " |
| Low temperature indirect hot water radiation.. | $20 \text { " to " }$ | 25 " 50 " | 50 " 100 " |

The above proportions will give a temperature in the buildings described of 70 deg . Fahr., the thermometer being at zero in outside atmosphere.

While there is no iron rule for computing the proper amount of radiation for heating buildings, owing to the variable conditions that enter into the calculations, the above table will prove valuable if allowances are made for extreme cases.

It is well to remember that small rooms, rooms with large window surfaces or exposed sides, and rooms with exceptionally thick walls or fireproof tiling, require more radiating surface in proportion to space than is ordinarily needed. Frame buildings require more radiation than stone, and stone more than brick.

## RAILROAD FREIGHT CLASSIFICATION.

## For Less Than Carload Shipments.

Less than carload shipment to all points west of the Nississippi River including Mexico, are governed by the Western Classification.

Goods contained in this catalogue, in the kind of packages specified, take the different classes as shown below.

The following is based on Western Classification current October 1, 1904, and we will not be held responsible for any amendements or changes that may be made after that date.

Explanation of Classes-D 1, Double First Class; $11 / 2$, One and One-Half Times First Class; 1, First Class; 2, Second Class; 3, Third Class; 4, Fourth Class. Released means that goods are shipped at owner's risk.

| Articles. | Class. | Articles. | Class. |
| :---: | :---: | :---: | :---: |
| Acid-Muriatic, cooked $\qquad$ bottles raw $\qquad$ carboys | D 1 D 1 D 1 | Fittings-Sink, Brass or N. P........boxed Urinal, <br> Fixtures-Gas, Brass.........boxes or bbls. | 2 2 2 1 |
| Antimony......................boxes or barrels | 2 | Fountains-Drinking, Iron Enl'd...boxed | 2 |
| sbestos-Mill Board.......................................................... Paper | 4 | Heaters-Hot Water, for wood or coal.... | 3 |
| Babbitt Metal...........................boxed | 4 | W'ater, "Domestic''........... | 3 |
|  | , | for Gas, instantaneous | $11 / 2$ |
| Glass " ...... " " " | 2 | ، for Gas with Iron Jackets | 2 |
| Basins-Crockerv...boxes. barrels or crates | 2 | -Closet. Iron, boxes, crates or casks | 2 |
| ERRATA. |  | Slop, Iron, " " " " | 2 |
| Articles. | Clas | $y d r a n t s, ~ F i r e$. | 3 |
| Boilers-Range, Iron. | 3 | lass Urinal Stalls.......... boxes or crates | 4 |
| Hot Water.........knocked down Steam ..... ...... | 3 |  |  |
|  |  | on-Corrugated, Black and Galvanized | 4 |
| boner stanas.................. | 3 | Planished.....Metal cases with wood covers | 4 |
| knocked down, boxes or bdls. | $t$ | Sheet, Black and Galvanized. | 4 |
| Bowls-Closet, Crockery...boxes, bbls. ? or crates ; | 2 | Iron Ridge Cap ..................in packages | 1 |
| Boxes-Street Washer.. | 3 | Lavatories-Crockery .................. boxed | 2 |
| Valve. | 3 | Iron, Enl'd...boxed or crated | 2 |
| Ventilating... | 3 | Marble, NotReleased, " " " | 1 |
| Brackets-Brass or Iron.....boxes or bbls. | 2 | " Released " " " | 4 |
| Brass Goods-Hose Sprinklers..... boxed | 2 | Ships', wooden, set up " " " | $11 / 2$ |
| Plumbers', Brass and N. P. " |  | Lavatory Fittings-Brass or N. P.....boxed | 2 |
| Water.................... " | 2 | Lead-Bar.....................sacks or boxes | 4 |
| Brass-Sheet or Roll. | $\stackrel{2}{2}$ | Caulking............... " " | 4 |
| Bronze Rods.... .......................... | , | Pig ..................... " " | 4 |
| ..............................loose | 1 | Sheet. .....................rolls boxed | 4 |
| Burners-Paint, Oil or Gasoline......boxed | $11 / 2$ | slatted | 4 |
| Charcoal................... .....bbls. or sacks | 3 | Bends.................boxes or bbls. | ? |
| Closet Combinations.......boxed or crated | 1 | Soldering Nipples... | 3 |
| Closets, Ships' | 1 | Traps ......... | 3 |
| Cocks-Basin, Bath, Pantry or Urinal......boxed | 2 | Washers. ........................boxed | 3 |
| Copper Sheets............................ " | 2 | Machines-Pipe Threading and Cutting.......crated | 1 |
| Fittings-Bathroom, Brass or N.P...boxed | 2 | Tapping ............. | $\stackrel{2}{2}$ |
| Crockery:........ | 2 | " "، ..............crated | 1 |
| ." Glass.. ........... " | 1 | Marble-For Shower Baths, Not Re- ? |  |
| Bath Tub, Brass and N. P. " | 2 | leased........boxed or crated f |  |
| Brass.........boxes, bbls. or kegs | 2 | For Shower Baths, Released ? | t |
| Cast Iron Screwed..... | 4 | Flo............boxed or crated i |  |
| Closet, Brass or N.................. | 2 |  |  |
| Closet, Brass or N. P...... boxed | 2 | Urinal Stalls, " Not ". .. | 1 |
| Malleable | 4 | Urinal Stalls, " Released .. ". ". " | + |

Railroad Freight Classification-Continued.

| Articles. | Class. | Articles. | Class. |
| :---: | :---: | :---: | :---: |
| Meters-Water.. ............boxed or crated | 1 | Tanks-Closet, Iron........ <br> boxed or crated <br> IVood..... <br> Urinal, Iron........ | 2 |
| Mirrors-Plate glass ....................boxed | 1 |  |  |
| Nails-Wire, Barbed.....................boxes | 3 |  |  |
|  |  |  |  |
| Oakum......................................bales | 2 |  | 2 2 |
| Packing-Rubber..............boxes or bdls. | 1 | Tin Plate...................................boxed |  |
| Pipe-Block Tin.............boxes or crates | 1 | Tools-Plumbers' <br> Tinners' |  |
| Cast Soil... | 4 |  |  |
| Conductor, Galv. ................nested | 2 | Torches-Braziers ,.... ................. " | $11 / 2$ |
| " " ...boxed or crated | 3 | Painters'..................... " | $11 / 2$ |
| ${ }^{\text {a }}$.................................. ${ }^{\text {amens }}$ casks or boxes | $\pm$ | Plumbers', Oil and Gasoline <br> Traps-Brass or N. P. <br> Cast Iron Fittings $\qquad$ bdls. Sewer |  |
| reels slatted | 4 |  | 4 |
| Sew | 3 |  | 2 |
| Wrought..................................... | 4 | Grease, Brass or N. P..........boxed |  |
| es-Bath Supply, Brass or N. P. .......boxed | 2 | Iron. |  |
| Closet Flush, " "" "... boxed $\}$ | 2 | ". ". Enl'd.boxed or crated | 2 |
| Supply, " " ""... boxed | 2 | Steam $\qquad$ crates, <br> " Weighing 100 lbs . or over. | 3 4 4 |
| Lavatorv, " . " " ...... boxed | 2 |  |  |
| Plumbing Goods not otherwise specified, including a miscellaneous assortment of plumbing appliances or materials. .boxed | 2 | Trough-Eaves, Galy. ..nested, crated or boxed Tube-Speaking, Tin....... Tubing-Brass or N. P...boxes, bbls, or casks loose | 1 |
| Polish-Metal, Liquid. <br> Paste | $\begin{aligned} & 2 \\ & 4 \end{aligned}$ | Tubs-Bath, Crockery .....boxed or crated Iron Enl'd....... | 1 |
| Pots-Fire, Plumbers' \& Tinners' Gasoline... | $11 / 2$ | " Steel Cop. Ln'd.. <br> " " Zinc" | 1 |
| " " " " Sheet Iron.. | $11 / 2$ |  |  |
| Radiators-Steam or Water | 3 | " Zinc | 1 |
| Ranges-Closet, Iron......boxed or crated | 2 | Foot, Crockery..... "، "، " |  |
| Urinal " ..................... " | 3 | $\begin{aligned} & \text { " Iron Enl'd... } \\ & \text { Laundry, Cement...............crated } \end{aligned}$ | 3 |
| " " ...... boxed or crated | 2 | "، Crockery..................coxed or crated | 3 |
| Receptors-Shower Bath, Crockery.....boxed) |  |  | 3 |
| * or crated \{ |  | " Iron Enl'd... " " |  |
| " Iron Enl'd...boxed $\}$ | 1 | Sitz, Crockery ...... "، "، | 1 |
| or crated <br> Rivets-Copper or Tinned . boxes, kegs or bbls. |  |  |  |
| Plain. | 4 | Urinals-Crockery ..boxes, bbls. or crates | 2 |
| Rosin................. ........barrels or boxes | 4 | Public, Crock'y $\qquad$ ". " " | 2 |
| Seats-Bath Tub.........................boxed | 2 |  | 2 |
| Closet, Wood......boxed or crated | 3 |  |  |
| Sink Fittings, Brass or N. P..........boxed | 2 | Valves- Brass....................................... <br> Iron | 2 |
| Sinks-Crockery.............crated or " | 3 |  | 2 |
| Iron Enameled...... "، " " " | 2 3 | Vises................................................... | $\pm$ |
| Kitchen ........... ". " " | 3 | Washers-Buggy $\qquad$ |  |
| - ${ }^{\text {and Steel, Single }}$ | 2 |  | 3 |
| Pantry, Copper............... | 1 | Waste-Cotton........................... .....bdls. Wire-Copper or Brass...bdls, rolls, boxes, bbls, casks | 3 |
| Slop, Iron Enameled .....crated or | 2 |  | 4 |
| Steel.........nested, | 3 | Iron or Stl. Coppd... ". "، ". ". " | 4 |
| Wash, Iron Enameled.. | 2 | ". " " Pla | 4 |
| Urinal Stalls...........boxed or crated |  | Tinned.. | 2 |
| Solder ......................................boxed | , | Zinc-Sheet................................casks | $t$ |
| Sprinklers-H | 2 | ". ............rolled and not packed <br> Slab. | 1 |
| Law | 2 |  | 4 |

## 1

* 

?


[^0]:    "Alfa" Embossed Wash Down Siphon Yitreous China Bowl ; Polished Oak, Round Cornered, Moulded, Zinc Lined Tank, $9 \times 20 \times 10$ inches, $71 / 2$ gallons capacity, with $1 \frac{1}{4}$-inch Siphon Flushing V'alve, Noiseless Ball Cock and Polished Oak Tank Board; $1 \frac{1}{4}$-inch Polished Oak Seat and Cover with Nickel-Plated Brass Hinge ; $1^{1 / 4}$-inch Nickel-Plated Flush Pipe, with Nickel-Plated Adjustable Elbow, Nickel-Plated Flush Pipe, Strap and Seat Bumper ; Nickel-Plated Angle Supply ( $1 / 2$-inch I. P. size); Nickel-Plated Floor Screws and Washers.

    For price, weights and measurements see page 3:3.

[^1]:    "Gnu" Plain Wash Down Siphon Vitreous China Bowl; Oak Hard Finished Round Cornered Zinc Lined Tank, $9 \times 20 \times 10$ inches, 7 gallons capacity, with $1 \not 1 / 4$-inch Gooseneck Siphon, Noiseless Ball Cock and Tank Board; 1 1/4-inch Oak Seat and Cover; $1^{1 / 4}$-inch Nickel-Plated Flush Pipe with Nickel-Plated Adjustable Elbow and Nickel-Plated Flush Pipe Strap and Seat Bumper; Nickel-Plated Screws and Washers.

    For price, weights and measurements see page 37.

[^2]:    $\dagger$ Carried in San Francisco only.

[^3]:    † Carried in San Francisco only.

[^4]:    One half dozen in a box.

[^5]:    Permingo ......... No. $\mathbf{t}^{1} / 2$. Couplings for $5 / 8$-inch Lead Pipe. Weight each, $41 / 2 \mathrm{lbs} \ldots \ldots \ldots$......Each, $\$ 3.00$ Permissif. No. $4^{1 / 2}$. Couplings for $1 / 2$-inch I. P., Male. Weight each, $4^{1 / 2} \mathrm{lbs}$ No. $4^{1 / 2}$. N. P. allover. Coupling for $3 / 8-\mathrm{in}$. I. P.,Female. Wt. ea., $41 / 2 \mathrm{Bbs}$ 3.25

    Permodill......... No. $4^{1 / 2}$. No Couplings with N. P. Locknuts. Weight each, $41 / 2 \mathrm{lbs} . . .$. .. 3.00
    Pcrmolo... No. $4^{1 / 2}$. With Square Soap Cup, add to above prices 1.00

[^6]:    Above Receptors can be furnished with any Shower or Needle Bath.

[^7]:    Code
    Perplicat
    Perpluvia

    $$
    \begin{aligned}
    & \text { Complete as described } \\
    & \$ 58.00 \\
    & \text { Less Marble Floor Slab } \\
    & \text { For Nickel-Plated Waste Strainer and Coupling add } \$ 5.00 \text {. } \\
    & \text { One in a case. } \\
    & \text { Weight complete as described, } 173 \text { pounds; weight less marble slab, } 59 \text { pounds. }
    \end{aligned}
    $$

[^8]:    $\dagger$ Carried in San Francisco only.
    In Orders and Specifications give Plate Numbers.

[^9]:    $\dagger$ Carried in San Francisco only.

[^10]:    Code........................................................................................................................ Pestluft
    Each.
    $\$ 9.00$
    Weight each, pounds
    Screws included with all Fixtures.
    $\dagger$ Carried in San Francisco only.
    In Orders and Specifications give Plate Numbers.

[^11]:    $\dagger$ Carried in San Francisco only.

[^12]:    + Carried in San Francisco only

[^13]:    $\dagger$ Carried in San Francisco only.

[^14]:    Mahogany Case with Nickel-Plated Copper Basin and Lining; Nickel-Plated Brass Pump, Soap Cup, Brush Holder, Towel Bar and other Trimmings.

    Supplies may be taken from tanks under cabin floor, or from outboard, if boat is on fresh water, discharging either into waste receiver, water-closet bowl, or directly overboard.

[^15]:    $\dagger$ Carried in San Francisco only.

[^16]:    Two in a package.

[^17]:    1221. 1 .
[^18]:    Code
    Pilatus

[^19]:    $\dagger$ Carried in San Francisco only:

[^20]:    $\dagger$ Carried in San Francisco only.

[^21]:    * Concealed Air Chambers cannot be used with Shallow Pattern Backs.
    $\dagger$ Carried in San Francisco only.

[^22]:    $\dagger$ Carried in San Francisco only.

[^23]:    $\dagger$ Carried in San Francisco only.

[^24]:    + Carried in San Francisco only:

[^25]:    ** In addition to the above tappings on top of Steam Boilers, there will be $1-1 \frac{1}{4}-\mathrm{inch}$ hole in Nos $00,0,1,2,3$ and 4 Boilers, $1-11 / 2$-inch in No. 5 Boiler, and $1-2$-inch in No. 6 Boiler. These tappings are to be used for steam trimmings.

    Send for Special Catalogue on Boilers. For Boiler Ratings see page 450.

[^26]:    Parties wishing Drums tapped differently from above, specify on order.
    **For Boiler Ratings see page 450. Send for special catalogue of Boilers.

[^27]:    Distance from Floor to Center Regular Tapping (all heights and sizes) $45 / 8$ inches.
    Water Radiators tapped 2 -inch Top and Bottom one end, 2 -inch opposite end. Steam Radiators tapped 2 -inch Bottom, each end. The Return End Section tapped for Air Valves, $1 / 8$-inch Steam or Water.

    * Add $11 / 2$ inches to total length for Radiator Bushings.

    See pages 458 and 459 for Regular Tappings.

[^28]:    Send for Special Catalogue of Radiators.

[^29]:    $\dagger$ Carried in San Francisco only.

[^30]:    The above Valves can be furnished with By-pass, the price varying according to size and style of Valve.

    The addition of a By-pass to a Valve usually lengthens the distance from face to face of Flanges, or from end to end of Hubs, the distance varying according to size of By-pass desired.

[^31]:    †Carried in San Francisco only.

[^32]:    * Male end Threaded 1 -inch and Tapped $1 / 2$-inch with $3 / 4$-inch Union.
    $\begin{array}{cccccccccccc}* * \text { Male " } & \text { " } & 1 & " & " & " & 3 / 4 & " & " & 3 / 4 & " & " \\ { }^{*} * \text { Male } & " & " & 1 & " & " & " & 1 / 2 & " & " & 1 / 2 & " \\ & \end{array}$

[^33]:    * Sizes marked with an asterisk are Malleable, all others are Grey Iron.
    $\dagger$ Carried in San Francisco only.

[^34]:    $\dagger$ Carried in San Francisco only.

[^35]:    $\dagger$ Carried in San Francisco only.

[^36]:    $\ddagger$ Carried in Los Angeles only.
    $\dagger$ Carried in San Franci,co only.

[^37]:    $\dagger$ Carried in San Francisco only.

[^38]:    $4 \mathrm{X}, 14 \times 20,1 \mathrm{X}, 2 \mathrm{X}, 16 \times 16$ and $2 \mathrm{X}, 3 \mathrm{X}, 4 \mathrm{X}, 20 \times 28$ carried in half boxes. $\dagger$ Carried in San Francisco only.

[^39]:    Code
    Fistiteram
    Per pound.
    \$...... About fifty pounds in a box.
    $\dagger$ Carried in San Francisco only.

[^40]:    Code.
    Inch.

[^41]:    + Carried in San Francisco only.

[^42]:    $\dagger$ Carried in San Francisco only.

[^43]:    $\dagger$ Carried in San Francisco only.

[^44]:    Loose.

[^45]:    $\dagger$ Carried in San Francisco only

[^46]:    $\dagger$ Carried in San Francisco only.

[^47]:    Code.
    Midault
    Number. 99
    Each........................................................ \$33. 00
    IVeight each, lbs................................... 17
    $\dagger$ Carried in San Francisco only.

